The Economist

JUNE 12TH–18TH 2004

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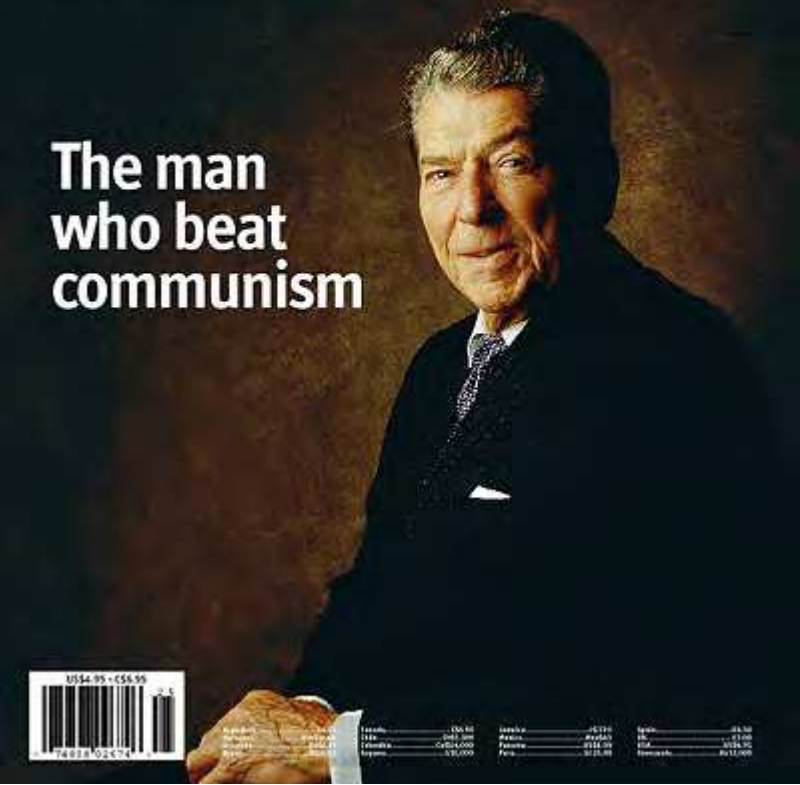

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Politics this week

Jun 10th 2004
From The Economist print edition

Agreement, at last

The UN Security Council unanimously passed an American-drafted resolution endorsing the appointment of an interim government in **Iraq**. It pledged international support for a plan to hold elections that would lead to a fully independent government, and approved sharing responsibility between the new government and the American-led multinational forces in matters of security.

See article

EPA

At a meeting in Savannah, Georgia, the Group of Eight rich and powerful countries (the G8) applauded the UN resolution and also endorsed an American plan, known as the **Broader Middle East and North Africa Initiative**, to encourage regimes in that area to have better governance and more democracy. Countries in the region say they are loth to have “American values” imposed on them.

A BBC cameraman, Simon Cumbers, was killed and the organisation's security correspondent (and expert on al-Qaeda), Frank Gardner, was seriously hurt when gunmen fired on them in a suburb of Riyadh, **Saudi Arabia's** capital, where they had been investigating the rise of Islamist terrorism. The next day, an American working for a defence company that trains Saudis to protect—among others—the royal family was killed, also in Riyadh.

Rebels in eastern **Congo** withdrew from Bukavu, the region's biggest town, which they had taken a week ago, allowing the UN's peacekeepers to take charge again.

See article

While an existing land-redistribution programme has already ruined most of **Zimbabwe's** commercial farming and made nearly half of Zimbabweans reliant on foreign food aid last year, President Robert Mugabe's government now says that in future all land will be owned by the state and then leased back to farmers.

Partial pull-out

The United States said that it planned to withdraw 12,500 of its 37,000 troops stationed in **South Korea** by 2006. Some of the troops will be redeployed to Iraq. Longer-range weapons and better technology are intended to maintain security in the region.

See article

North and **South Korea** agreed to open transport links through the military zone that divides the two countries, and South Korea promised to provide food aid to its impoverished neighbour. The two countries also agreed on other measures that would reduce military tensions.

India's parliament closed on June 8th after protests from the BJP-led opposition alliance, which demanded the sacking of three ministers who face criminal charges. The ruling coalition, dominated by Congress, accused the opposition of having double standards.

Reagan's last act

AFP

America mourned the death of **Ronald Reagan**, its 40th president. Mr Reagan is the first president to receive a full presidential funeral in the past 30 years, and became the tenth president to lie in state under the Capitol rotunda.

See article

John Ashcroft said that the administration rejected torture as a means of extracting information from terrorist suspects. The attorney-general's comments came during a Senate hearing into Justice Department memos that are said to have advised George Bush that he had broad wartime powers that overrode treaties on torture.

See article

Mr Bush nominated a former senator from Missouri, **John Danforth**, as his ambassador to the UN. Mr Danforth will replace John Negroponte, who is set to become America's ambassador to Iraq when sovereignty is handed over on June 30th.

Fifty-eight senators sent a letter to Mr Bush asking him to ease restrictions on the use of **embryonic stem cells** in medical research. In April, over 200 congressmen sent a similar letter to the president.

Europe at the polls

Europe's voters began trooping to the polls in their five-yearly elections to the **European Parliament**. Turnout is expected to be low; in several countries Eurosceptics and populists seem likely to do well.

See article

As part of the 60th anniversary celebrations of **D-Day**, George Bush met his French opposite number, Jacques Chirac. But though he called France “America's first friend”, and though the French later voted for a UN Security Council resolution on Iraq, differences between the two remain wide. An overwhelming majority of the French public wants John Kerry to win the American presidential election in November.

See article

Several men suspected of involvement in the **Madrid train bombings** in March were arrested. In Italy, an Egyptian said to have masterminded the bombings was taken into custody. The Belgians arrested 15 more suspects amid fears of a plan to attack the Paris Metro. Spanish police arrested six people thought to have supplied the explosives for the Madrid bombings.

Turkey gained more support for opening membership negotiations with the European Union when a court freed four Kurdish members of parliament, including Leyla Zana, pending their appeal against convictions in 1994. In another move to placate Brussels, Turkish television began broadcasting programmes in Kurdish and Arabic for the first time.

See article

Recall ruling

Venezuela's electoral authority ruled that opponents of Hugo Chávez had collected enough signatures to force the president to submit to a recall referendum. It said this should take place on August 15th—only four days before the cut-off date beyond which defeat for Mr Chávez would not trigger a fresh election.

See article

The United States Supreme Court ruled that trucks from **Mexico** should be

allowed to operate freely in the United States. They should have had that right ten years ago under the North American Free-Trade Agreement, but were blocked by lobbying and court actions by the Teamsters Union and environmental groups.

AP

See article

The ELN, **Colombia's** second-largest leftist guerrilla group, agreed to start peace talks with the government. Mexico will act as a mediator.

See article

A Chilean judge refused a request by a court in **Argentina** for the extradition of Carlos Menem, a former president, for questioning over corruption allegations.

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Business this week

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A Vegas wedding?

MGM Mirage showed its hand with a $7.7 billion bid for Mandalay Resort Group, a Las Vegas casino business. A successful deal would make MGM Mirage the biggest American casino operator and would give it half the hotel rooms on the strip. But others could yet raise the stakes.

See article

Steven Heyer, **Coca-Cola's** president and chief operating officer, is to step down from the number-two job at the soft-drinks giant. He had been widely expected to depart after being passed over for the top job in May in favour of Neville Isdell.

The Bush administration decided not to appeal against a court decision to throw out federal rules requiring **regional phone companies** to lease their networks cheaply to rival phone companies. The so-called Baby Bells may now hike prices.

UneasyJet

EasyJet issued a second profits warning within a month, signalling turbulent times for Europe's budget airlines. The British carrier blamed stiff competition and high fuel prices but said that profits for 2004 would exceed the £52m ($85m) it earned last year. Its shares have plunged by 58% this year.

Rod Eddington, chief executive of **British Airways**, and two other top executives at the firm agreed to forgo their annual bonuses as the airline attempts to cut employee costs by £300m ($548m) over two years. “Posturing by very rich men,” explained a trade-union spokesman.

Microsoft's secret

Germany's **SAP** vowed that it was not for sale after news emerged that Microsoft had held merger talks with Europe's biggest software company last year.

Meanwhile, **Microsoft** launched an appeal against a European Union ruling that it had abused its monopoly position. The European Commission has slapped a record fine of *euro*497m ($612m) on Microsoft and ordered it to change its business practices.

See article

The European Commission also decided to reopen an antitrust investigation into **Intel**. It first began to probe the world's leading chipmaker in 2001 after claims that Intel had used its market dominance and financial clout to stifle competition. Similar allegations led Japanese regulators to raid Intel's office in Tokyo in April this year.

Driving force

The world's leading carmakers accelerated plans to make vehicles for the booming Chinese market. **General Motors** said that it would boost investment in its Chinese joint-ventures with an extra $3 billion

by 2007. **Ford**, which lags far behind GM in China, reacted by saying that it hopes to triple output this year.

DaimlerChrysler mulled a lawsuit against Mitsubishi Motors, its Japanese partner, over worsening quality-control problems at Mitsubishi Fuso, a commercial-vehicle operation in which DaimlerChrysler acquired a majority stake in March. Later, Japanese police arrested a former boss of Mitsubishi and five former executives for suspected negligence over two deaths caused by faulty lorries.

Shutting up shop

Germany's constitutional court confirmed a ban on **Sunday shopping** by throwing out a legal challenge from Kaufhof, a department-store chain, while recognising that exceptions, such as shops in railway and petrol stations, are growing. According to the constitution, Sundays and official holidays are upheld as days of “spiritual elevation”.

Measured response

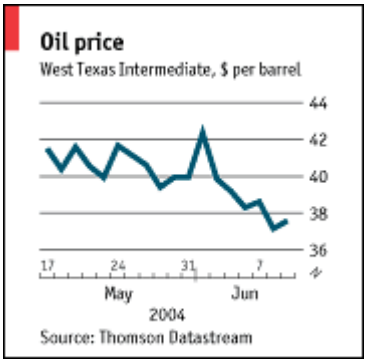
Alan Greenspan said again that America's interest rates could begin to rise in a “measured” fashion. But the chairman of the Federal Reserve pledged that if inflation rose more sharply than predicted the central bank would “do what is required”, hinting that more aggressive increases might be needed to restrain price rises.

The **Bank of England** raised interest rates by a quarter point to 4.5%— the fourth rise in eight months. Despite a similar increase last month, house prices and consumer credit continue to grow.

Thomas H. Lee bet heavily on the prospects for **Refco**, the world's leading futures brokerage. The American buy-out firm took a 57% stake in Refco in a deal valuing the company at around $2.3 billion. The deal will set up Refco for a possible future stockmarket flotation.

Falling oil pressure

Oil prices fell sharply after OPEC agreed to increase production, and data were released showing that American oil reserves had recovered. But sabotage to a key Iraqi pipeline, fears of attacks on oil facilities in Saudi Arabia and a strike by Nigerian oil workers prevented the price from falling further.



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Ronald Reagan

The man who beat communism

Jun 10th 2004
From The Economist print edition

Ronald Reagan was fond of a nap and no intellectual. Oddly enough, he had what it took

Corbis

HE WAS, most clear-thinking people clearly saw, not the right man for the job. To be president of the United States in the cold-war thunderstorms and economic frost of the early 1980s, you needed to be somebody with a mind sharp enough to carve through half a dozen problems at a time, somebody who could spend 18 hours a day rationally assembling facts and figures, a natural chairman of all-powerful committees: you needed to be, well, a clear-thinking person.

Ronald Reagan, as the ghost in this week's sky would cheerfully admit, was not at all like that. Only a fortnight from 70 when he became president, the one-time minor film actor often glazed over in cabinet meetings. He disliked, and sometimes dodged, painful arguments with awkward colleagues. He could fail to notice murky things going on behind his back. He was a definite non-intellectual. He was bound, in short, to be a bit of a bumbler.

The decade the door was pushed open

Instead of which, the Reagan presidency of 1981-89 changed the face of the world. The American-led alliance won the cold war, a potentially even bloodier confrontation than the first world war's murderous clash of European nationalisms and the second world war's six-year struggle against would-be Superman Hitler and his friends. By defeating communism, Ronald Reagan ended one of history's most violent centuries and opened the door to the possibility that for at least a few decades ahead war, though it can never be abolished, would be a smaller horror than in the past, and democracy might become available to more of the people who wanted it. In his foreign policy, at any rate, he turned out to be one of the two or three most effective American presidents of the 20th century.

It was hard to imagine that this would happen when he was elected in 1980. The late 1960s and the 1970s had seen a powerful counter-attack by communism against its semi-defeat in the Cuba crisis of 1962. The Soviet Union had squashed Czechoslovakia's attempt to win a little freedom for central Europe, and had set about disconnecting western Europe from America's nuclear protection by building a nuclear missile force of its own that could hit America. The North Vietnamese army had helped its local friends to impose a one-party communist dictatorship on a South Vietnam most of whose people did not want it. The Russians were busily constructing a network of alliances in the Middle East and Africa. The cold war, it seemed, might roll on forever.

Reagan would have none of this. From the moment he took office, he made it clear what he believed: that America stood for a good idea, the Soviet Union for a bad one; that the notion of a balance of power between them—"mutually assured destruction"—was thus morally wrong; and that the Russians' bulging military muscle had no real economic power behind it. Therefore he decided to pour money into America's armed forces, and (*pace* the Greenham Common ladies) put medium-range nuclear missiles into Europe; that way, Europe's defence would not need an American intercontinental strike. If a rearmed America stood nose-to-nose with its adversary, and firmly but politely refused to budge, he reckoned it would win the day. He was right. By the year Reagan left the White House, the Russians had lost eastern Europe; by the next year, they had abandoned communism.

To be sure, Reagan's foreign policy was not perfect. He did not know what to do about Cuba. He was

blurry about China. He did little about Israel and Palestine. His liking for Mikhail Gorbachev at one point almost led him into giving the last Soviet leader a foolish and unnecessary nuclear concession.

The worst episode of the Reagan presidency was the Iran-contra affair. The president secretly authorised the sale of American-made weapons to some supposed moderates in the Iranian government; the money thus raised was given to the contras, the American-backed rebels fighting the leftist government of Nicaragua. The whole thing involved much lying, some blush-making quibbles when the lies were found out, and—if you believe the official story—a president who did not know what some of his officials were up to. This week's nit-pickers do have some genuine nits to pick.

Nor should Reagan's admirers claim that without him the collapse of communism would never have happened. It would have collapsed anyway, in the end. A system which believes that a small group of self-selected possessors of the truth knows how to run everything is sooner or later going to run into the wall. But Reagan brought the wall closer. He got the American economy growing again (admittedly at a price), which made more Russians realise their own system's incompetence; he could therefore spend far more money on America's military power; and he put those new missiles into Europe. The result: maybe 20 years less of Marxist-Leninist ideological arrogance, and of the cold war's dangers.

That gut feeling

How did he do it, those puzzled intellectuals still ask? By being primally American: nonchalant, ever-hopeful, tough as an old boot when necessary. By plucking the hearer's heart, in speeches written for him by speech-writers who knew what phrases—“the surly bonds of earth”, “the boys of Pointe du Hoc”—would flow naturally from his lips. But above all by knowing that mere reason, essential though it is, is only half of the business of reaching momentous decisions. You also need solid-based instincts, feelings, whatever the word is for the other part of the mind. “I have a gut feeling,” Reagan said over and over again, when he was working out what to do and say.

And what might he be thinking this week, now that he has cast aside the particularly surly bonds of his last years on earth? Ronald Reagan believed in American power, not just the military sort of power but also economic strength and that special American gusto. He had no problem with the idea of an American imperium. But he did not mean by that word an empire of the sort the Europeans used to have.

The European empires were far-off lands controlled by the imperial power, which sent out its soldiers and judges and “collectors” to govern them. When the end of the cold war opened the door to a new, post-20th-century world, Reagan hoped that American power could now be used to help far-off people decide for themselves how they should be governed. He reckoned most of them would choose the democratic road, bumpy though it often is—and be duly grateful to America. There was nothing wrong or ignoble about that hope.

He will therefore be directing a look of kindly relief at this week's decision by the United Nations, which has at last given its approval to the process by which America hopes to get an elected government into power in Iraq by the end of next year (see article). Ronald Reagan would certainly have had qualms about the way his successor George Bush fought the Iraq war. He himself would have coaxed European doubters, not hectored them. He would have wanted things much better organised against the predictable outbreak of guerrilla violence after the conventional battle had been won. But he is surely now hoping that, if his countrymen and their allies can stick to their guns and their principles, post-Saddam Iraq can begin to be part of a newly expanding empire of democracy.

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Iraq

A glimmer of hope, at last

Jun 10th 2004
From The Economist print edition

The Iraqis have a chance to build themselves a better future

AP

Get article background

AFTER much huffing and puffing on both sides of the Atlantic, the United States and Europe, so bitterly at odds until recently, have blessed a resolution in the UN Security Council that puts Iraq firmly on the road to true sovereignty. An American-led multinational force will share responsibility for security in the face of a continuing insurgency by fighters intent on making the new Iraq fail. A corner, it is now hoped, has been turned (see article). Iraq, still under ferocious attack from Islamist fanatics and throwbacks from Saddam Hussein's regime, should at least no longer be at the mercy of the competing vanities of the big powers in the chambers of the UN. Iraqis can rest assured that virtually all outsiders now want their new regime to succeed, rather than mock America as a muddled and meddlesome menace to global stability.

Give the Iraqis a chance

The political and diplomatic building-bricks for the new Iraq at last seem in place. An interim government led by a tough, militarily-connected man chosen by the UN with America's approval is seeking to assert itself even before the Americans formally hand over political power at the end of this month. If Iraq calms down, the American-led multinational force should be out by the end of next year—and the UN would have to renew its mandate if the Iraqis wanted it to stay on. No less hopefully, Arab regimes in the region seem ready to give the new government a fair chance; for the fires of instability in Iraq threaten to spread to other parts of the combustible Middle East. There is rare hope in Washington and London that the flames can at last be doused, so that a new edifice—a prosperous and more or less democratic Iraq—can start rising from the ashes of Mr Hussein's tyranny.

There is hope, too, of a warier kind in Baghdad. Few of the parties vying for power say they have been given a fair deal in the new government; those that have done well cannot say so for fear of being branded as stooges. Suicide bombs, some planted by al-Qaeda or its friends, are still exploding. Bullets still threaten the lives of those who co-operate with the occupying forces, be they politicians or humble policemen. But there is a window of fleeting opportunity for Iraq's stop-gap rulers to convince their compatriots that the new government, due to administer the country until a general election in January, is not a sham and that the insurgents, not the Americans and their allies, are the true enemies of Iraq.

The interim government is a necessarily careful balance of sectarian interests, with a Sunni Muslim as president, a Shia in the more powerful post of prime minister, and Kurds well-placed in other big jobs. As a result of the compromise at the UN, the precise line of military command is blurred, with the new government having the main say in strategy, while the Americans have the last word in operations

involving their own troops. If the Iraqi government wishes to usher out the foreign forces, they will be able to do so.

That is as it should be. Iraqis will get a grip on their country only if they are given responsibility for it. And the Americans have realised, belatedly, that a total purge of the Saddamite old guard, especially in the army, was unwise, though well intentioned and indeed applauded by many Iraqis. Moreover, President Bush has also acknowledged, in the face of earlier misplaced advice, that the UN has a crucial part to play in helping Iraq along the road to some kind of democracy.

It is uncertain, all the same, whether such hopeful diplomacy in New York will persuade more Iraqis to risk their necks by backing a new order that the insurgents will still denigrate as a puppet show of the infidel West. The tough new prime minister, Ayad Allawi, sounds confident that he can bring a number of influential former Baathist officers and their rank-and-file back on side. Iraq's most powerful Shia cleric, Grand Ayatollah Ali Sistani, has endorsed the latest steps. There is hope again that he will help bring the rebel Shia followers of Muqtada al-Sadr to heel.

Still nerve-racking

The insurgency has thankfully not become a civil war, as many predicted. The so-far-silent majority of fearful, disappointed Iraqis seems prepared to accept the notion of a federal but unitary country, with due rights for minorities. But the country is still caught in a vicious circle: without security, economic reconstruction will falter and the bullet will have more say than the ballot. Beating the bombers will be hard. It can be done only if Iraqis now swing behind their new rulers—as they did not do with the Americans.

The next seven months will still be dangerous and bloody. But there is a chance, at last, that Iraqis, with a government of their own, can start to build the better future they deserve.

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Europe and Iran

Testing times

Jun 10th 2004
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Time for Europeans to toughen their anti-nuclear message

THE hope in Europe that “soft power”, offering engagement in place of confrontation, would encourage Iran to give up its dangerous nuclear ambitions seems set to collide with hard reality. Buried in the details of a report next week to the board of the International Atomic Energy Agency (IAEA), one of a damning series since Iran's 18-year deception over its nuclear programmes was uncovered last year, are several time-bombs.

The inspectors cannot know whether Iran has a secret nuclear-weapons programme; only secretive Iran knows that. But they do demonstrate that not all traces found of highly enriched uranium (the higher the better for military use) could have come in on imported machinery, as Iran still claims. Its interest in particularly sophisticated centrifuge machines for enrichment, they suspect, goes beyond the small “research” effort it now owns up to. And they are certain Iran bought its enrichment designs and parts from the same supply network as Libya, which now admits (while Iran does not) that with its uranium starter-kit came detailed bomb-building plans.

Iran still insists its nuclear programme is just for making electricity. But few believe that. Last October, Britain, France and Germany thought they had a deal that gave Iran a face-saving exit from the bomb-making business: they would hold off reporting Iran's nuclear transgressions to the UN Security Council, as the IAEA's board is legally obliged to do, if all uranium enrichment activity stopped, and Iran came clean about its nuclear past and co-operated fully with inspectors. And they offered technology trade, with Iran keeping the peaceful benefits of nuclear power, if it abandoned the uranium and plutonium processes that bring it close to nuclear break-out.

But Iran, it seems, was just playing for time. Its work with inspectors has increased, but so have the holes in its nuclear story. It is about to start building a heavy-water reactor that is too small for power generation but ideal for plutonium-making. It is preparing uranium feedstock for its centrifuges and still producing parts for them, despite a promise to stop. And western intelligence agencies suspect Iran is still hiding sites where other nuclear work has been done.

As the going gets tougher

Iran threatens “consequences” if the IAEA's board will not drop the issue: it hints it may restart its uranium enrichment machines, or it could quit the Nuclear Non-Proliferation Treaty (NPT), as North Korea has done. And what would the Europeans do then? Little but belly-ache, Iran may calculate. If it is to be persuaded differently, and the NPT is to be saved from the shredder, Europe's soft power needs to be given a harder edge.

With 60% of its people under 30, many of them without jobs, Iran needs all the trade (some 40% of its imports come from the European Union) and investment in its oil and gas industries (much of it now coming from European and Japanese companies) that it can get. Sanctions, beyond those imposed for years by the United States, could therefore hurt Iran badly. As a first signal of their intent to get tougher, if Iran won't keep its side of the October bargain, Britain, France and Germany should join America in insisting that Iran's nuclear rule-breaking go directly to the Security Council, where international sanctions could be contemplated.

Iran would be livid if Europe flexed its trade muscle even in this limited way. But it also needs to be told clearly that any nuclear miscalculation it makes will carry a heavy price.

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The European elections

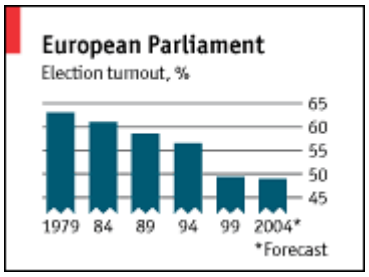
Apathy contest

Jun 10th 2004
From The Economist print edition

The cure for Europe's democratic deficit lies at home, not in Brussels

WILLIE WHITELAW, a British Tory grandee, once accused Harold Wilson, a Labour prime minister, of going around stirring up apathy. Not much stirring has been needed for this week's elections to the European Parliament. Average turnout, which has gone down steadily since 1979, looks like falling again. In the ten new countries that joined the European Union last month, even more voters may stay at home than in the older members. The big winner of the world's second-biggest democratic vote (after India's election) is likely to be the apathetic party.

This is provoking much gloom about the EU's democratic deficit and the toothlessness and irrelevance of its parliament. Some of this is misconceived (see article). An average turnout under 50% is low; but, even when adjusted for countries like Belgium and Luxembourg in which voting is compulsory, it comfortably exceeds the 39% score for the United States Congress in 2002. The parliament is by no means irrelevant. Indeed, because it has equal say with national governments over most EU laws, it has more independent power than many national parliaments, some of which are genuinely toothless. And many MEPs work harder than some national ones.



The true source of Europe's democratic deficit is more fundamental. It is that democracy does not work on a Europe-wide basis—because Europe remains a collection of nation-states, not a United States. In almost all the 25 countries voting this week, the European elections have been fought on national, not European, issues. Many governing parties are heading for a drubbing that will reflect disenchantment with national governments, not with Brussels. Not that this implies contentment with the EU. On the contrary, opinion polls suggest that it is plumbing new depths of unpopularity—and one of the few countries in which Europe has been a real issue is Britain, thanks to a surge by the UK Independence Party, which wants to withdraw from the EU altogether.

Political parties in Europe know that they are national creatures. Although they form up in groups for the sake of greater influence within the European Parliament, they work and even sometimes vote on national lines. On most European matters, German Christian Democrats and British Conservatives are diametrically opposed, yet they are in the same European People's Party. Only the Greens even pretended to stand on a common manifesto this time round. The European Parliament will thus continue to lack the legitimacy that automatically attaches to national legislatures, no matter how few people elect these, or how poorly domestic lawmakers perform.

It is plain that the right cure for a democratic deficit of this kind is not the usual one of giving the European Parliament ever more powers—which the constitutional treaty due to be agreed at next week's EU summit is likely to do yet again. Instead, the deficit needs to be tackled at national level, by giving national parliaments more say. There are two ways to do this. The first, which ought to be a main aim of the summit, is to strengthen the constitution's “subsidiarity” rules, which provide for powers to be exercised at the lowest sensible level of government. National parliaments' ability to use subsidiarity as a reason to object to legislative proposals made by the European Commission should be greatly enhanced.

The second is to give national parliaments themselves a more direct role in the EU's work. Before 1979, this was achieved by nominating members of national legislatures to the European Parliament. But the heavy workload involved in such double-hatting would make it impossible to go back to that—quite apart from the awkwardness of trying to cure a democratic deficit by abolishing elections. Nor is the idea of yet another legislative body, a “Senate” to represent national parliaments, the right answer, for it would largely duplicate the national representation of governments through the Council of Ministers. Instead

stronger links should be forged between national and European legislatures that scrutinise draft EU laws. A little-known co-ordinating body called COSAC already exists, but as a mere talking-shop that meets just twice a year. It could be given a bigger role in EU lawmaking.

Stop the circus

Reform is also needed in the European Parliament itself. The most urgent need is to end the nonsense of the whole show commuting every month between Brussels and Strasbourg. Not only does this cost as much as €200m ($245m) a year; it also ensures that the parliament gets less attention from Europe's leaders, press and public. Next week's summit could put the parliament permanently in Brussels—if only France would agree. The parliament would also work better if it had fewer members, perhaps 500 instead of 732. Electorates would identify more with their MEPs if they voted by districts or constituencies, instead of according to national lists. And a top priority of the new parliament must be to scrap its much-abused system of travel expenses and perks, under which MEPs have claimed more generous travel costs and daily allowances than they should. But all that said, the real cure for Europe's democratic deficit is to be found at home, not in Brussels.

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Open source

Beyond capitalism?

Jun 10th 2004
From The Economist print edition

The open-source model can be applied to goods other than software, but it has its limits

THAT “open source” is a good way to make software is beyond question. For those unfamiliar with the term, the open-source model allows many people to collaborate on the development of a piece of software by making its underlying programming instructions, or source code, open to everyone, usually by publishing them on the internet. The resulting program is then given away too: open-source software is shared, not sold. Commercial software vendors, by contrast, jealously guard their source code because only by keeping it secret can they protect their ability to demand money for their products.

Alamy

By far the best-known example of open-source software is Linux, an operating system that is maintained by volunteers around the world, runs on everything from wristwatches to mainframes and now powers one in five of the world's server computers. Open source's other successes include Apache, a piece of software that powers two-thirds of the world's web servers, Sendmail, a program that dispatches most of the world's e-mail, and MySQL, a database program.

Advocates of open source argue that it produces software that is secure, reliable and, of course, cheap. All this is clearly true, despite the fact that open source's opponents—chief among them Microsoft, the world's largest software company—try to deny it. Now many people want to apply the open-source model in many fields other than software. There is already an open-source cola recipe, an open-source encyclopedia and open-source academic journals. The model is also being applied in medical research (see article). Some zealots even argue that the open-source approach represents a new, post-capitalist model of production. Are there no limits to the power of open source?

Of course there are. The model is particularly well suited to information-rich goods, of which software is merely the most obvious example, since it is pure information. The surprisingly good open-source encyclopedia (see Wikipedia.org) is another example. Like software, it is modular, which allows different people to work on different bits. Drugs, too, are information-rich goods, and searching for candidate molecules and performing clinical trials may be amenable to open-source-style distributed collaboration. So far, so good. But building, say, an open-source car is rather more problematic, since information (in the form of design and specifications) constitutes only a minor ingredient: the costs of materials and manufacturing would remain. Until someone invents a “universal replicator” capable of synthesising any object from software specifications, it is hard to see how the open-source model can be applied to manufactured goods.

The model has other limitations as well. It is not clear, for example, that the open-source model can be genuinely innovative—most open-source software merely imitates existing commercial products. Furthermore, the open-source software movement is driven by the desire to dethrone the proprietary software model, embodied by Microsoft. This shared goal makes its members more willing to contribute their efforts to the common cause, which may not apply in other fields.

A force for good

Is open source really a new post-capitalist economic model? In fact, open source might be said to be parasitic upon capitalism. IBM, for example, pays an army of programmers to work on Linux, both for the greater good and as a competitive ploy against Microsoft. And many people who contribute to open-

source projects do so with the approval of (and using the resources of) their employers, be they universities or firms. Ultimately the open-source approach may prove to be symbiotic with capitalism. Computing firms including Novell, Sun and Apple are adopting hybrid models in which they “open source” (yes, it is a verb) some bits of some of their products.

Even where the open-source model is not adopted, however, it can still have beneficial effects. The very existence of open-source alternatives often acts as a force for greater openness and transparency. Microsoft, despite its hatred of open-source, now allows certain large customers to inspect its source code, though not to share or modify it. A similar “open-sourcesque” concession was recently made by Reed Elsevier, a publisher of scientific journals. Stung by comparisons with the openness of internet-based journals, it will now allow academics to post papers that have been accepted for publication in its journals on their own websites too.

The open-source model will never replace capitalism or live up to the most Utopian claims of its most enthusiastic supporters. Nevertheless technology-enabled collaboration among large groups of people working without pay for a common aim, whether it is called “open source” or something else, can be a powerful force for good, and is to be welcomed.

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Corporate crime

Justice for bosses

Jun 10th 2004
From The Economist print edition

Do America's crooked executives really need to be jailed for so long?

JOKES about how Martha Stewart will redecorate her prison cell cannot be revived just yet, now that her sentencing has been postponed until July 8th. But unless she secures a surprise retrial, America's best-known lifestyle guru will soon be behind bars. She will be the most famous jailbird created during America's current campaign to bring errant executives to justice. But her sentence, for obstructing a government investigation, will be mild compared to many now being handed down. Thanks to a review of sentencing guidelines in 2001, further beefed up following directives in the Sarbanes-Oxley legislation adopted after the scandalous collapses of Enron and WorldCom, even junior executives found guilty of perpetrating corporate frauds are receiving lengthy prison sentences of the kind normally reserved for murderers, serial rapists and armed robbers (see article). That should give rise to mixed feelings, at least, in anyone who cares about justice.

If executives are convicted of crimes, they should certainly be punished. Corporate frauds are not victimless, as is sometimes claimed: they can wreak havoc on employees, customers and shareholders, especially if they drive a firm into bankruptcy, as some have done. Executives hold positions of trust: betraying that trust is a serious matter. They also tend to be white, and richer than the typical American criminal: those traits should confer no privilege, nor be seen to confer any, when sentence is passed. Just punishment should strive to say that American justice is blind to colour and wealth.

Yet the current sentencing regime for company executives is troubling. The typical corporate crook has no prior convictions, will never again be put in a job where he can repeat the crime, and is usually a promising candidate for rehabilitation.

A more specific worry is that the recommended sentences are too strictly defined and are too closely tied to the notion of the loss caused by a fraud. Calculating loss is more art than science, particularly when losses due to a falling share price are included in overall losses. Shares can tumble for many reasons, and executives might be blamed for losses that are not really their fault. In some cases, such as that of a Dynegy executive recently jailed for 24 years, a huge loss can occur without the fraudster making any personal financial gain. At the very least, that argues for judges to use more discretion to reflect individual circumstances when sentencing.

The new length of corporate-fraud sentences may also be influencing in troubling ways one of the most controversial elements of America's justice system: plea bargaining. Most criminal convictions in America come from plea bargains, in which defendants exchange their right to a trial for less severe prosecution or a shorter jail sentence. This cuts court costs, but the system is open to abuse, especially if prosecutors use the carrot of a shorter sentence to encourage a suspect to testify against others. Used wrongly, this carrot might become a powerful incentive to lie. Some lawyers worry that, in their current pursuit of corporate big fish, prosecutors might be tempted to abuse the plea-bargaining process to secure damaging false testimony from smaller fry.

Far worse injustices occur daily within America's legal system. Fraud is not a capital offence, after all, and executives can usually afford a good lawyer. However, injustice is still injustice. Crooked executives should be punished: if they can't do some time, they shouldn't do the crime. Nonetheless, the time should be proportionate to the offence.

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Letters

Jun 10th 2004
From Economist.com

The Economist, 25 St James's Street, London SW1A 1HG
FAX: 020 7839 2968 E-MAIL: letters@economist.com

Rebuild the House of Saud

SIR – Your suggestions of reform for the House of Saud only invite future attacks such as the massacre in Khobar ("A battle that must be won", June 5th). The unexciting proposal of a semi-representative constitutional monarchy to bring resentful middle-class Saudis into the fold has a dark underbelly. "Ruthlessly" hunting the armed insurgents, who are largely a creation of a repressive society that allows no state criticism, is no solution. To extinguish the rage that fuels terrorism, all Saudis must be brought into the fold. Any proposals short of representative democracy can be used by terrorists as further evidence that western powers are antagonistic to popular rule in the oil-rich region.

Christopher Robbins Miller
London

Iron constitution

SIR – Reading of the travails of the draft EU constitution reminds me of another historic document that raised similar issues: the Articles of Confederation (Charlemagne, May 22nd). These also addressed majority voting among member states, power by state size and national sovereignty, and clearly avoided federalism too. This creative political thinking was consigned to history's waste bin as an unwieldy, unworkable and paralysed political concoction.

There is a perfectly good solution, cogently argued, and tried and tested for over 200 years. The American constitution resolved every one of the issues over which the EU member states are currently horse-trading and in a lot less than 200 pages.

Chris Modzelewski
Boonton, New Jersey

Dominate and innovate

SIR – Monopolies may indeed have an incentive to innovate to stave off competition from smaller rivals in markets where barriers to entry are low (Economics focus, May 22nd). But where an incumbent's monopoly goes unchallenged, there is another incentive, assuming the overall goal is to maximise profits: reducing costs while keeping prices the same for consumers. Government watchdogs should remember this.

Tom Worth
London

SIR – Monopolists have an incentive to own new patents and who is in a better position to dominate research and development in a monopolist's field? By this means they can secure their future even if they do not develop any applications from the patents at once but continue "milking the cow" as long as it is profitable. New products can be brought out when the risk of not developing them is high, for example, if a competitor is making similar developments, markets are shrinking or the monopolist wants to destroy the competition.

Marcelo Patiño

Montevideo

SIR – Shareholders expect their monopolist to perpetuate its outsized rents even as it gradually saturates its market. Makers of complementary products expect to grow rich too and will look elsewhere if profits fall. Managers at monopolists have an incentive to heed those expectations. Extending the product line is one way to respond.

David Lane
Boston

Dubai's downside

SIR – It was with some bemusement that I read your glowing endorsement of Dubai ("Arabia's field of dreams", May 29th). While Dubai's development is noteworthy, it is not without problems. An anything-goes capitalist atmosphere is tempered by restrictive ownership provisions for firms wishing to operate in Dubai. Only in the free zones is full foreign ownership allowed, a set-up ideal for serving regional markets but not if your main business is local. The property and construction bubble is driven by massive government projects that will require a substantial rise in Dubai's population and economic activity to prosper.

It is ironic that the emirate positions itself as the regional leader in IT and communications while internet access is severely restricted by a system that blocks unwanted content and the press is heavily censored. And many of the multinationals established in Dubai serve the increasingly troubled Saudi Arabian market. Add a raft of social problems and the difficulties of a population of which 80% come from abroad, and the sunset off Jumeirah beach is no longer as picturesque as it seems.

Carsten Boeckleman
Dubai

Big news

SIR – Broadsheets are shrinking, but more interesting is that it took this long ("Tabloiditis", May 29th). Broadsheets became popular after the Tories introduced a stamp tax in Britain in 1712. This taxed newspapers per sheet of newsprint, so papers were published as single sheets with huge pages. That it has taken almost 300 years for this traditional size to change is proof of the power of taxes to distort behaviour. An old, stupid tax has made it unavoidable for generations of readers of quality papers to hit fellow passengers when they turn the page on public transport.

Johan Norberg
Stockholm

Explaining India's miracle

SIR – In your write-up of the debate between Dani Rodrik and me you give him the last word (Economics focus, May 29th). He and Arvind Subramanian argue that reform does not explain the Indian miracle because productivity had shifted as early as 1980. In fact, much to my own dismay, the vast body of research has failed to yield any robust evidence of a jump in the productivity in either the 1980s or 1990s. Even granting a shift in productivity, do they seriously believe that growth could have been sustained in the 1990s without reform?

Arvind Panagariya
Columbia University
New York

Come to my hub

SIR – You say Miami possesses all the attributes of a hub for Latin America and the Caribbean, and suggest that this gives it a "head-start" in its bid to be the permanent site of the headquarters for the Free Trade Area of the Americas ("Miami nice", May 22nd). In listing the contenders you fail to mention Port-of-Spain in Trinidad and Tobago, the candidate of the 14 member states of the Caribbean Community. This may mislead readers that Miami's success is preordained—a view that some are propagating.

Richard Bernal
Director-general
Caribbean Regional Negotiating Machinery
Kingston, Jamaica

A diet of beer and curry

SIR – Last week in Mumbai, reading about the scientific evidence supporting the high-fat/low-carbohydrate Atkins diet, I noted that the only obese Indians there are visiting from America ("Big news", May 22nd). The extremely thin and lean Indians thrive on what could be termed a "reverse" Atkins diet: rice, wheat, vegetables, nuts, fruits, a little chicken and fish—lots of carbs and not a gram of fat. Adhering to such a regimen for seven days, and drinking beer freely, I lost six pounds.

Moshe Schein
Staten Island, New York

ONLINE ARTICLES

The following correspondence refers to articles published only online

Reaganomics

SIR - Your article on Ronald Reagan ("The first post-Enlightenment president?", Economist.com, June 7th) does him a couple of very serious disservices. You say that: "The dramatic tax cuts of his first year did not bring the swift soaring of production, and therefore of revenues, that he had been let to expect: instead, it was the budget and trade deficits that soared..." In an even worse slap in the face you then give him credit for making "safe the way for Bill Clinton".

Stuff and nonsense. Yes, the deficit went up on Reagan's watch and that was (probably) a bad thing. Yet consider what Reagan accomplished: he presided over what was then the longest peacetime expansion in American history; he set in motion the free-trade talks that led to NAFTA; he oversaw a real reduction in the rate of annual growth in federal spending from 4% to 2.5%, while manufacturing productivity soared; and he introduced a fairer and flatter tax system. Perhaps all that doesn't qualify as a revolution; but, as someone who lived through it, I wouldn't mind repeating it.

Stephen Bainbridge
Los Angeles

Oil

SIR - In your article on the Beirut OPEC meeting ("Kerfuffle over falafel", Economist.com, June 3rd) you state that: "The problem is not a lack of reserves *per se.* Thanks to seismic probes and satellite imaging, new pockets of oil are being found all the time." In my 20-plus years in the oil business I have yet to see a single barrel of oil found by satellite imaging (this may be due to the thousands of feet of rock that inconveniently get in the way), And if reserves and new pockets of oil were as easy to come by these days as you imply, perhaps Shell would not have had such an interesting start to 2004.

The big story that you have consistently missed is the looming crunch between the peaking of world oil production and rising world demand. The current rise in oil prices, coming at a time when there has been no major disruption to supply, is merely the foretaste of bigger problems to come.

Simon Brissenden
Alberta, Canada

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The Reagan legacy

He led a revolution. Will it survive?

Jun 10th 2004 | WASHINGTON, DC
From The Economist print edition

AP

Not the purest of conservatives, but he turned American politics upside-down

THIS week American party politics was put on hold as the nation mourned Ronald Reagan. The news programmes endlessly replayed Reagan's great lines—“Mr Gorbachev tear down this wall”—while talking heads mused on how the star of “Bedtime for Bonzo” made it to the world's most powerful job. No ceremony was stinted in saying goodbye to the actor turned president. His body was flown from California to Washington, DC, on an aeroplane designated Air Force One for the day. The guests at his memorial service in the National Cathedral included four presidents. More touching were the tributes from ordinary Americans: the flags festooned over freeways and the ten-hour queue to see his body as it lay in the Reagan Library in Simi Valley, California.

The national outpouring of emotion was an index of Mr Reagan's huge importance. There is a growing consensus that he was one of the most consequential presidents of the 20th century: in the same league as Franklin Roosevelt (his life-long hero) and Harry Truman (the architect of the cold war order that Mr Reagan did so much to bring to an end).

He presided over one of the great realignments of American politics as “conservatives of the heart”—southerners, westerners and blue-collar workers—abandoned the Democrats for the Republicans. He launched the biggest peacetime build up of the armed forces. He embarked on a radical economic policy of tax cuts and deregulation that terrified much of the establishment—especially as the deficit ballooned skyward—but that nevertheless helped to create a sustained boom. And he pursued a bold foreign policy that put pressure on the Soviet Union just as it was beginning to collapse from the inside.

Yet there remains an enduring sense of puzzlement at America's 40th president. Mr Reagan prided himself on being a conviction politician. “I say there are simple answers to many of our problems—simple but hard,” he liked to declare. “It's the complicated answer that's easy because it avoids facing the hard moral issues.” He believed that government is the problem rather than the solution. He regarded business as the great engine of wealth-creation. He saw foreign policy as a simple clash between right and wrong: between the city on the hill and the evil empire. Yet this champion of simplicity was himself surprisingly hard to make sense of.

Three things made him stand out as odd. The first was his background. Mr Reagan was one of a handful of American presidents who were genuine outsiders, neither educated at Ivy League colleges (like all

three of his successors) nor nurtured by a big political machine. Worse still, he made his name in a film industry that is supposed to provide money and endorsements for politicians rather than the politicians themselves.

The second was his personality. The man who prided himself on being a straightforward mid-westerner was in fact enigmatic. He was an enormously popular man who nevertheless much preferred his own company. He was a champion of small-town America who migrated as quickly as possible to the bright lights. He was an exponent of family values who divorced his first wife and had a distant relationship with his children. Even Nancy Reagan once remarked that she sometimes felt that she never really knew Ronnie.

A sense of priorities

The third was his detachment from his own administration. Mr Reagan frequently looked more like a symbolic head of state than a hands-on-president. Lou Cannon, who chronicled his political career, tells a story about an economic summit in Williamsburg, Virginia in 1983. James Baker, then the White House chief of staff, provided him with a thick briefing book on the afternoon before the summit. On returning the next day he found the book unopened. Asked why he hadn't done his homework, Mr Reagan replied, “Well, Jim, ‘The Sound of Music’ was on last night.” This detachment from the nitty-gritty of decision-making created constant warfare between “Reaganites” and “moderates”, and makes it hard to judge whether the credit for his policies belongs to him or to his advisers.

Puzzlement about the man is understandable. What about the policy that bears his name? What was Reaganism? What was its impact on the country? And to what extent is George Bush living up to his self-image as Ronald Reagan's heir?

Reaganism was the first successful political expression of a new intellectual movement in American life: radical conservatism*. Mr Reagan was the first movement conservative to hold the highest office in the land. And he was the first president to measure success and failure in terms of his ability to stick to the movement's core principles: promoting liberty, reducing government and projecting American power abroad.

Old v new Republicanism

To understand Mr Reagan's importance you have to remember how the Republican Party used to be. In the 1950s, it was a party dominated by the east-coast establishment, pragmatic in domestic affairs and internationalist in foreign policy. Dwight Eisenhower believed in containing communism abroad, not rolling it back; and in gently expanding government at home, not shrinking it. Richard Nixon ran on almost the same platform as John Kennedy, who appointed several old-style Republicans to his administration. The conservative movement at that time was marginal to American politics.

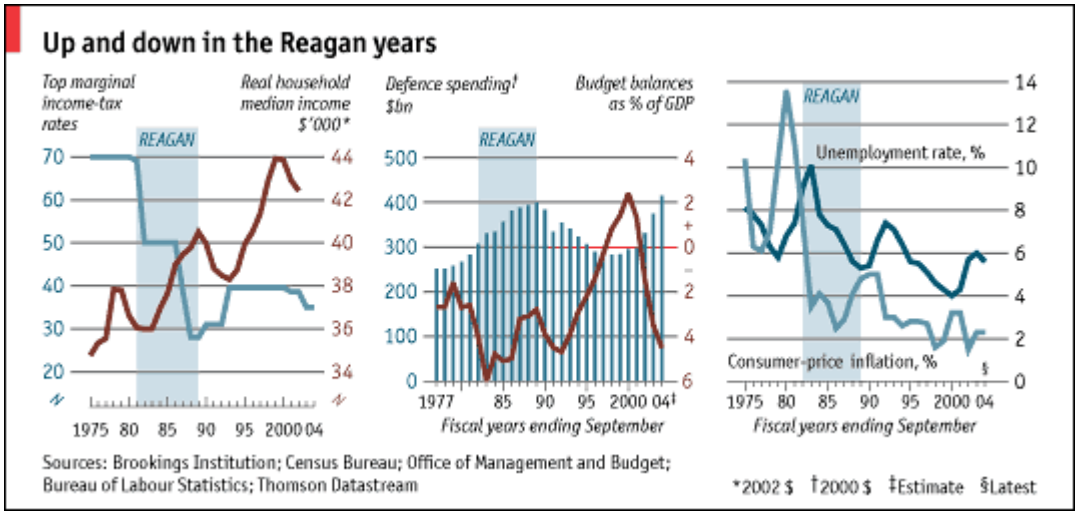
Yet there were stirrings underneath. The Democratic Party's southern wing was unhappy with the party's growing enthusiasm for racial equality. The burgeoning west resented the east's grip on Republican politics. Think-tanks such as the American Enterprise Institute and the Hoover Institution preached the virtues of free-market economics, as did the University of Chicago's economics department. In 1955 William Buckley founded the *National Review* to break the liberal grip on American intellectual life.

But the first incursions of the conservative movement into American politics were a disaster. Barry Goldwater was undoubtedly a true believer. In his bestselling “Conscience of a Conservative” (1964) he declared that he had no interest in “streamlining” government, only in reducing its size. But he was a terrible campaigner, and went down to one of the worst defeats in presidential history. Nixon flirted with the right in his successful 1968 presidential campaign, but as president he reverted, introducing the most comprehensive wages-and-prices policy in American history.

In 1980 Reagan succeeded, where Goldwater failed and Nixon only half-tried, in putting together a conservative governing coalition. He triumphed in the south as well as in the west and in much of blue-collar America, carrying 44 states. Four years later he clobbered Walter Mondale by 59% to 41%, gaining a majority in every region, every age group and every occupational category except the unemployed.

How did Mr Reagan manage to pull off what many people regarded as impossible? The underlying reason

was the implosion of liberal America. The Democratic Party's embrace of affirmative action had stirred up a mighty backlash among whites. The breakdown of law and order spread anxiety across the country. And Jimmy Carter's presidency was a long series of national humiliations. All Mr Reagan had to do during the 1980 presidential debates was to prove that he was not a trigger-happy lunatic.



Mr Reagan was a true believer who lacked the usual personality defects of the type: a sectarian with an ecumenical style. The description of FDR—that he possessed a second-class mind but a first-class temperament—was no less true of Mr Reagan. He not only radiated optimism but had the knack of using humour to defuse the movement's biggest problem: the fear that it was dominated by wild-eyed extremists.

How far did he succeed in turning America in a more conservative direction? Many conservatives regard him as an icon, above criticism. But even icons have to get their hands dirty when they play politics.

The list of Mr Reagan's conservative triumphs is long. He began his presidency by pulverising organised labour, sacking more than 10,000 members of the air-traffic-controllers' union for striking (even though the union had been one of the few to support his presidential bid). In 1981 he embarked on one of the biggest tax cuts in American history; before long the top marginal rate of income tax had fallen from 70% to 28%, weakening the progressive principle that Democrats cherished. He gave a push to the deregulation movement which had already started under Mr Carter. All this was driven by a clear ideological agenda: get the government off people's backs (partly by starving the beast) and unleash entrepreneurial forces.

He also helped engineer a huge surge in American patriotism. The Carter years were a period of American self-doubt: about the economy and about American power (with the memory of Vietnam still tormenting most policymakers). Mr Reagan set about wiping this away. He increased military spending by a quarter between 1981 and 1985. He talked to the American people not about “malaise” (as Mr Carter had done) but about “morning in America”. By the end of his second presidency, much of the talk about American decline had gone out of fashion: the country regarded itself once again not only as the world's greatest superpower, but also as the world's most dynamic economy.

The new establishment

Mr Reagan built a conservative counter-establishment at the heart of Washington. Meant originally to counterbalance the liberals, it is now an establishment in its own right. He was assiduous in courting conservative intellectuals (including hawkish Democrats). He attended functions put on by conservative magazines and organisations. He built close ties with conservative think-tanks. He made good on his promise to appoint conservatives to the judiciary: in 1986, he took the opportunity provided by Chief Justice Warren Burger's resignation to remake the Supreme Court, elevating the court's most conservative member, William Rehnquist, to chief justice and naming Antonin Scalia to the vacancy.

AP

Jelly beans for a man who liked simple things

Yet as a conservative Mr Reagan was in fact far from pure, and his policies fell far short of revolutionalising America's economy. He failed to match his 1981 tax cuts with commensurate cuts in public spending, setting off a huge explosion in the deficit. And he stood up to the conservative movement at times when he did not share its goals. He negotiated with Mikhail Gorbachev because he cherished a private dream of ridding the world of nuclear weapons. He paid only lip-service to the Christian agenda because he was fundamentally a libertarian, who didn't want to shove his morality down people's throats. He signed one of the most liberal abortion laws in the country when he was governor of California, and he was the first president to have an openly gay couple to stay at the White House.

He also had a marked streak of pragmatism. He came to office promising to abolish the Department of Education, but ended up bloating its budget from $14.7 billion in 1981 to $21.5 billion in 1989. He spent much of his presidency compromising the free-market principles on which he had built his career. In 1982 he agreed to roll back a large chunk of the 1981 tax cuts to deal with the swelling deficit (though he insisted on calling his tax increases “revenue enhancers”). In 1983 he agreed to a big rise in the payroll tax as part of a package to shore up Social Security.

He was also one of the more protectionist American presidents in the post-war era. His administration was full of Reaganauts who wore Adam Smith ties but doled out pork to their favourite interests.

This is not to deny that Mr Reagan shifted America rightwards. The big achievements of his administration—slashing the top rate of tax, building up the armed services, winning the cold war, institutionalising the conservative counter-establishment—far outweighed smaller compromises. But his ideology was not unmixed. In 1981, two days before a crazy character tried to shoot him, Mr Reagan told White House correspondents at the Gridiron Dinner that “sometimes our right hand doesn't know what our far-right hand is doing”. What happened in practice was that the pragmatists in his administration frequently succeeded in keeping his far-right hand in check.

Ronald Wilson Bush?

To what extent is George Bush Mr Reagan's heir? The similarities between the two men's administrations are striking. Like Mr Reagan, Mr Bush prefers simplicity to nuance; like Mr Reagan, he has made tax cuts and a huge defence build-up the signature tunes of his administration; like Mr Reagan, he sees himself as engaged in a struggle with evil (this time an “axis” not an “empire”); and like Mr Reagan, he is widely regarded outside the United States as a dangerous cowboy.

Moreover, Mr Bush has a Reaganesque ability to change direction while claiming that he is sticking to principles: look at his deviations from free-market orthodoxy over agriculture and coal and steel, or his current volte-face in Iraq, during which he dramatically modified American policy. He even has a Reaganesque taste in leisure, making sure that he has plenty of rest, and time spent clearing brush on his ranch.

The big parallels are deliberate. Mr Bush decided from the first to model himself on the Gipper rather than on his father, George Bush senior. His vice-president, Dick Cheney, justified America's growing deficits on the grounds that “Ronald Reagan proved that deficits don't matter.”

The parallels also have cultural roots. Mr Bush is the product of the same transformation of the

Republican Party—from east-coast and patrician to south-western and ideological—that produced Mr Reagan. He grew up in Texas rather than in his father's Connecticut. The only book that he was seen willingly reading at school was Barry Goldwater's “Conscience of a Conservative”. He is as happy among sunbelt businessmen as he is out of place among European statesmen.

Yet there are striking differences between the two men. One of the most obvious is their attitude to the Christian right. Mr Reagan supported his religious right wing, at least in theory, but as a buttress, from the outside. Mr Bush is a pillar in the central nave. He signed a bill to outlaw partial-birth abortion (and supported lots of smaller initiatives to limit abortion rights). He supports a constitutional ban on gay marriage. And he restricted stem-cell research despite opposition from Mrs Reagan, who felt such research might have helped with her husband's Alzheimer's.

Mr Bush's enthusiasm for social conservatism is, indeed, endangering the sunbelt coalition that Mr Reagan did so much to build. While Mr Reagan managed to keep both western libertarians and southern moralists happy, Mr Bush's southern-fried band of conservatism is anathema in California and increasingly unpopular in such places as Arizona.

A second difference is their attitude to government. From the first moment he appeared on the national stage, Mr Bush sold himself as a “compassionate conservative” rather than a root-canal small-government conservative. He sang the praises of “focused and energetic government” and even had a good word to say about Lyndon Johnson's Great Society. Mr Bush is expanding one of America's biggest entitlement programmes, Medicare. He is also trying to use government to promote conservative ends such as responsible fatherhood. If the Reagan administration was full of Hayekians (followers of F.A. Hayek) who wanted to take an axe to government, the Bush administration is full of Straussians (followers of the German philosopher Leo Strauss) who want to use government to promote virtue.

A third big difference lies in political partisanship. This week's outpouring of grief over Mr Reagan's death has obscured the fact that, at the time, a great many people both at home and abroad disliked his policies. But he never attracted the hostility that has fastened on Mr Bush, at least since the Iraq war. He never lost the support of European leaders during the debate over deploying cruise and Pershing missiles, mainly because Europe felt much more immediately threatened by the Soviet Union than it does by al-Qaeda.

At home, Mr Reagan had no choice but to reach out to Democrats, because, in 1980, registered Democrats outnumbered registered Republicans by 17 percentage points. In today's 50-50 America, Mr Bush's main priority is to galvanise his half of the electorate.

Yet it is worth remembering that in the 1980s many liberals thought that Mr Reagan was a weird aberration—a long national daydream, to quote the title of a book from the period. Today many liberals think the same about Mr Bush, hoping he will be humiliated in November's election. But whatever happens at that election, these liberals are wrong about the longer-term drift of American politics. Mr Reagan's presidency signalled a profound shift in American life. His revolution realigned domestic politics, and laid the basis of a challenging relationship between America and the rest of the world.

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*The rise of the conservative movement is the subject of a new book by two of our writers, John Micklethwait and Adrian Wooldridge: “The Right Nation: Conservative Power in America” (Penguin Press).

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The economy

Cursed by lagging perceptions

Jun 10th 2004 | WASHINGTON, DC
From The Economist print edition

Corbis

Is the economy doing well enough, plainly enough, to help George Bush?

MORNING in America or jobless recovery? 1984 or 1992? These parallels have long inspired and haunted George Bush's White House. Ronald Reagan romped to a landslide victory in 1984 amid a booming economy; George Bush senior lost the 1992 election during a lacklustre, job-scarce recovery. Fortunately for today's president, America's current recovery is looking ever more robust. But voters do not yet seem to agree.

For the past nine months America's economy has grown at an average annualised rate of 5.6%, the fastest nine-month growth since 1984. Not only do the latest figures show jobs being created apace, but new statistical revisions suggest that job growth has been stronger for longer than many had thought.

Almost 1m jobs were created between March and May, the fastest increase since the giddy days of early 2000. Since January, the average monthly job gain has been 238,000—not blistering, but certainly healthy. With 1.4m new jobs created since last August, more than half the 2.7m jobs lost on George Bush's watch have now been recovered. According to Jim O'Sullivan of UBS Bank, recent revisions to income statistics also suggest that job growth at the end of 2003 will turn out to be stronger than the current numbers suggest.

Earlier this year Greg Mankiw, the chairman of Mr Bush's Council of Economic Advisers, was ridiculed for a forecast that suggested America's economy would create 2.6m jobs this year. If job creation continues at today's pace, that forecast will prove too low.

The quality of new jobs is also improving. More are permanent and higher-paying; less than 10% of the net new jobs created this year have been temporary. The long-beleaguered manufacturing sector has been adding new jobs for four months. The gap between job growth in low- and high-paying industries has narrowed substantially. Earlier in the recovery, job growth was concentrated in industries, such as hotels and restaurants, that pay well below average, while the jobs in higher-paying industries were shrinking. That has now changed, as the pace of job creation has risen sharply in higher-paying jobs.

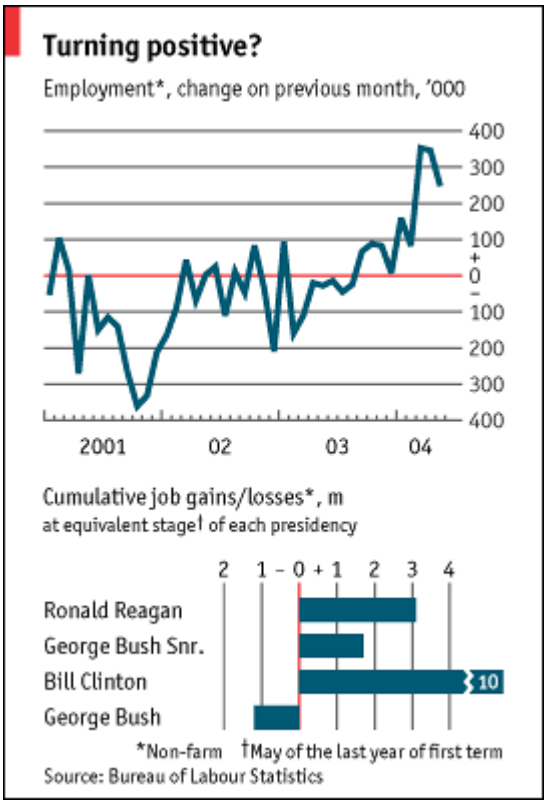
Moreover, a slew of other statistics suggest the economy's strength is unflagging. Despite higher petrol prices, both chain-store sales and car sales accelerated in May. Monthly surveys of purchasing managers

in both services and manufacturing suggested persistent strength across the economy. As Richard Berner from Morgan Stanley puts it, “Recovery is now maturing into a solid expansion.”

Given all this, the Federal Reserve is virtually certain to raise rates at its meeting on June 29th. The big question is how far or fast thereafter. The Fed's official position is that America's extremely loose monetary policy can be tightened at a “measured” pace. This week, however, Alan Greenspan, the chairman, raised the possibility that tightening could be more rapid if inflationary pressures required it, going out of his way to stress that the Fed would do “what is required” to keep inflation under control.

The irony for Mr Bush, however, is that while Wall Street frets about inflation and higher interest rates, ordinary Americans still seem deeply glum about their economy. According to Gallup's latest monthly poll, only 35% of people felt the economy was in good or excellent shape in early June, up from 29% in May, but not much changed from readings earlier in the year. The number of Americans seeing economic improvement (47%) was barely higher than the share who felt the economy is getting worse (45%). In February, by contrast, 53% of respondents thought the economy was improving.

What explains the gap between the economic statistics and the polls? Time is clearly a vital factor. Voters' perceptions of economic improvements always lag actual economic shifts by many months (a fact that cost George Bush senior the 1992 election). And even when Americans' own circumstances improve, that may not translate into confidence in the overall economy. Concerns about other things, too—notably Iraq—are probably clouding Americans' opinions of the recovery.



But it is also true that for many Americans the economy does not seem so wonderful. The fruits of this recovery, thus far, have been more evident in firms' profits than in workers' wages. As a share of GDP, wages are at their lowest level in decades. By several measures, the job market is still weak: the average spell of unemployment, for instance, is still rising. But, most important, for many Americans improved job news is being offset by bad news, from rising petrol prices to soaring medical costs. Though wage growth has begun to accelerate recently, how much it is rising depends on what numbers you look at. According to the latest employment report, hourly wages for non-supervisory workers rose by only 2.2% in the year to May, compared with consumer-price inflation of 2.3% in the year to April.

As a gauge of overall wage pressure, the hourly wage statistics have problems (they exclude supervisory workers and benefits, for instance). But they may help explain why many ordinary Americans do not feel better off. If the economy continues its current trajectory, there is no doubt that this glumness will go. But it is too early to be sure that it will lift before election day in November.

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About sponsorship

Immigration

More Mexicans, please

Jun 10th 2004 | CHICAGO
From The Economist print edition

Vicente Fox will find a mid-west only too happy to take his people

Get article background

NATIVISTS in Texas and Arizona may still want to keep Mexicans out of America, but in the mid-west, far from the border, a growing chorus is calling for better integration of the large Mexican population that already exists. Employers need them, schools are full of their children, politicians seek their votes and, increasingly, banks want their money.

President Vicente Fox will be visiting next week, talking to community leaders in Chicago and inspecting education programmes in Minnesota. His visit will also shine light on the irregular status of many Mexicans in America. The Bush administration is unlikely to act on the issue before November (an immigration plan floated in Washington earlier this year has not yet been fleshed out to Mexicans' satisfaction), but the subject came up again this week, when a regional task-force assembled by the Chicago Council on Foreign Relations issued a report highly critical of America's immigration policies. It wants to see step-by-step legalisation of undocumented workers and a temporary worker programme. Immigrants may not be universally embraced, but the mid-west needs them.

The integration push is already under way at the Mexican consulate in Chicago. Under a programme set up this spring by the Institute for Mexicans Abroad (a government agency created by Mr Fox), daily lectures are held there on topics ranging from worker rights to banking and health care. From 7am each day, crowds of people line up to apply for an identity card known as a *matricula consular*, which is now accepted as valid ID by 800 law-enforcement agencies across America. As the *matriculas* have gained wider acceptance, doors have opened to immigrants in other areas, blurring the line between services available to legal and illegal Mexicans.

Now financial institutions are courting these hard-working people. No wonder: Mexicans sent $13.3 billion in remittances home from America last year (providing the second-largest source of income after oil), and three-quarters of those who remit funds have no bank accounts. A growing number of banks (118 nationwide, including 86 in the mid-west) now accept alternative forms of identification—generally the *matricula* card along with a taxpayer identification number—to open bank accounts. Thirty-three of the 48 American banks that offer international remittance services are in the mid-west, and America's bank regulators are encouraging the efforts. “Banks aren't so interested in the remittances, they're interested in the relationships,” says Michael Frias, an official with the Federal Deposit Insurance Corporation (FDIC). “They're looking at this as a long-term proposition.”

A pilot programme uniting the FDIC, banks, the consulate and community groups was launched in the mid-west last year. It promotes greater financial access and integration for immigrants through banking, mortgage services, financial education and scholarships. “The New Alliance Task Force”, as the programme is known, has been so successful that a national rollout may be announced during the Fox visit.

Mr Fox will also stop in Detroit to talk trade; Mexico's car industry is scared stiff about China. One helpful sign is that Mexican goods should move into America's interior more easily after a Supreme Court decision on June 7th allowing the passage of Mexican trucks, which until now have been made to stay in the border region.

Finally, in this election year, it would be hard for Mr Fox to ignore the growing influence of Mexicans in American politics. Over 16m Latinos will be eligible to vote in November. Despite aggressive efforts by both parties across the country, Latino registration and voting rates still lag behind those of whites and

blacks. As for politics back home, Mexicans in America may hold dual citizenship but are ineligible to vote in Mexican elections from afar. This is an issue they will undoubtedly raise with their president. “Fox promised a lot of things when he came here as a candidate” several years ago, recalls a Mexican community organiser who intends to demonstrate in Chicago. “He called us heroes. This time, we're going to ask him what he's been doing to help us out.”

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Torture

A memo too far

Jun 10th 2004
From The Economist print edition

“A scholarly effort to define the perimeters of the law”

DOES the Bush administration sanction torture? Appalled Democratic members of Congress say it does, after the leak of confidential government memos providing legal justification for the use of torture in interrogating terror suspects. The documents, drawn up by Defence and Justice Department lawyers in 2002 and 2003, suggest that the president's “inherent constitutional authority to manage a military campaign” overrides any international conventions or domestic laws that prohibit the use of torture.

At a hearing of the Senate Judiciary Committee on Tuesday, Senator Edward Kennedy lashed out furiously at John Ashcroft, the attorney-general, challenging him to produce the memos. Mr Ashcroft refused, saying that it was not good policy openly to debate presidential powers in wartime. He repeated the administration's claim that it was opposed to all torture.

Another Democratic senator, Joseph Biden from Delaware, demanded that Mr Ashcroft say whether he believed torture was ever justified. When the attorney-general declined to answer, Mr Biden accused him of being evasive. “You know I condemn torture,” a visibly discomfited Mr Ashcroft finally replied. Mr Biden drove home the point: “There's a reason why we sign these treaties...so when Americans are captured they are not tortured. That's the reason, in case anybody forgets it.”

Not only has the United States signed up to the 1949 Geneva Conventions banning torture or any inhuman or degrading treatment, but it has also ratified the UN Convention against Torture. This clearly specifies that torture cannot be justified either by war or by any other exceptional circumstance. But in ratifying that treaty in 1994, the United States gave itself a let-out, combining it with reservations that prevented it going beyond the provisions of the American constitution.

According to the leaked memos, drawn up as part of a review of interrogation procedures of detainees in Iraq and Guantánamo Bay, the ban on torture “must be construed as inapplicable to interrogations undertaken pursuant to his [Mr Bush's] commander-in-chief authority”. That same authority, the documents suggest, gives the president power to override any statutory controls that are placed by Congress on interrogation methods.

The memos also propose a much narrower definition of torture than is generally accepted. Inflicting moderate or fleeting pain, for example, does not necessarily constitute torture. To qualify as torture, the pain has to be “equivalent in intensity to the pain accompanying serious physical injury, such as organ failure, impairment of bodily function, or even death.” Moreover, a person can be found guilty of torture only if he acts with the “express purpose” of inflicting severe pain, mental or physical. Torture can be justified if the interrogator “believed that his act is necessary and designed to avoid greater harm”.

Administration officials claim that the United States has never violated international laws banning torture. The two memos, they say, were never intended as more than “a scholarly effort to define the perimeters of the law”. They also say that the prisoners in Iraq, Guantánamo Bay and elsewhere have been treated humanely, except in the cases of “abuse” at the Abu Ghraib jail, which are now being investigated.

Even if this were to be believed, the memos would seem to confirm suspicions that the Bush administration has, at least at one time, contemplated the use of torture, and has sought to avoid the criminal consequences of doing so.

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The nation's health

Fighting flab in Arkansas

Jun 10th 2004 | LITTLE ROCK
From The Economist print edition

Fried chicken becomes the Devil's food

AP

Huckabee's philosophy

THESE days, Governor Mike Huckabee of Arkansas prefers an apple to pecan pie. He has lost more than 100 pounds (45kg) in a year, ever since a health scare forced him to take up a diet-and-exercise regime. Now he wants his podgy state to emulate him.

Last year, state legislators passed an act—the first of its kind in the country—to measure the body mass index of the state's schoolchildren. The results, America's most comprehensive data on child obesity, were recently released at a national obesity summit in Virginia, where Mr Huckabee was honoured for his plans. The data revealed that more than 40% of Arkansas's children are obese or at risk of becoming so. The national average hovers around 30%.

Children are not alone in the bulge battle. More than 60% of Arkansas adults are overweight. The state's myriad chronic health ailments, induced by obesity and smoking, crown national charts. Arkansas's stroke rate is 30-40% higher than the national average, and rates for cardiovascular disease and cancer are 10% higher. Some 26% of the state's adults smoke, and 35% of its high-school pupils puff while studying their algebra. The national average for both is around 23%.

Good fiscal reasons lie behind the governor's campaign. Five per cent of the state's Medicaid cases use up 50% of the Medicaid budget. The state's Medicaid programme costs almost $3 billion a year and is growing at a 9% annual rate. If things go on this way, Arkansas can forget about better roads or schools.

Recently, Mr Huckabee outlined the early stages of a Healthy Arkansas Initiative. He ordered state agencies to ban smoking not only inside state buildings, but within 25 feet of their doors. Mr Huckabee also wants to expand Medicaid cover to pay for anti-smoking devices, such as nicotine patches. Arkansas is one of the first states to recommend such a proposal.

Under the law passed last year, parents will soon receive their child's health report card with recommendations for changing diet and exercise. Along with mandated screenings, the act also bans vending machines in elementary schools and establishes a Child Health Advisory Committee to develop standards for nutrition and exercise.

Getting fit doesn't happen overnight, much less in a state where fried pickles and rich casseroles are staples of the diet. Although national physicians and leaders have applauded him, Mr Huckabee's local critics have poured scorn on his efforts. And even some of those who admire him feel that, since he gave up pie, he doesn't look as blooming as he once did.

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About sponsorship

Swing states

Pennsylvania's puzzles

Jun 10th 2004 | HARRISBURG, PHILADELPHIA AND PITTSBURGH
From The Economist print edition

Republicans still nurse hopes in a heavily Democratic place

GEORGE BUSH has visited Pennsylvania more frequently than any state other than Texas. Yet you don't have to be a partisan Democrat to wonder if he is wasting his time. Registered Democrats outnumber registered Republicans by almost half a million. The Democrats have won the state in the past three presidential elections. And since 2000, when Al Gore won it by 200,000 votes, the Democrats claim that they have strengthened their grip.

Democrats point to three things to back up their belief that John Kerry will do even better than Mr Gore. The first is the change of power in the state capital, Harrisburg. In 2000 George Bush could rely on the enthusiastic support of the governor, Tom Ridge (now head of the Department of Homeland Security); today, the governor's office is in the hands of a savvy Democrat, Ed Rendell. Don Morabito, the executive director of the Pennsylvania Democratic Party, argues that Mr Rendell's victory in 2002 not only suggests a rising enthusiasm for the Democrats; it also puts a great deal of institutional power in their hands.

The Democratic base is also fired up as never before. Democratic front organisations, such as America Coming Together (ACT) and the Partnership for America's Families, are both thriving in the state. They demonstrated their formidable vote-gathering power in the 2003 mayor's race, when John Street—hardly one of America's great mayors—increased his majority from 9,000 votes in 1999 to 80,000. In the three months before the election Democratic activists registered 86,000 new voters, most of them blacks and Latinos: an astonishing achievement in a city of just 1.5m residents. Some target households were visited several times in a row.

ACT and its allies have little difficulty tapping into anti-Bush sentiment. Minorities are still resentful about the “stolen” election of 2000. Blue-collar workers have seen 160,000 manufacturing jobs leave the state since 2001 (and Mr Bush added insult to injury by flip-flopping over steel sanctions). The opposition to the war in Iraq from Michael Moore-reading students is all too predictable. But some Democrats point out that opinion in working-class western Pennsylvania is also beginning to turn against the war.

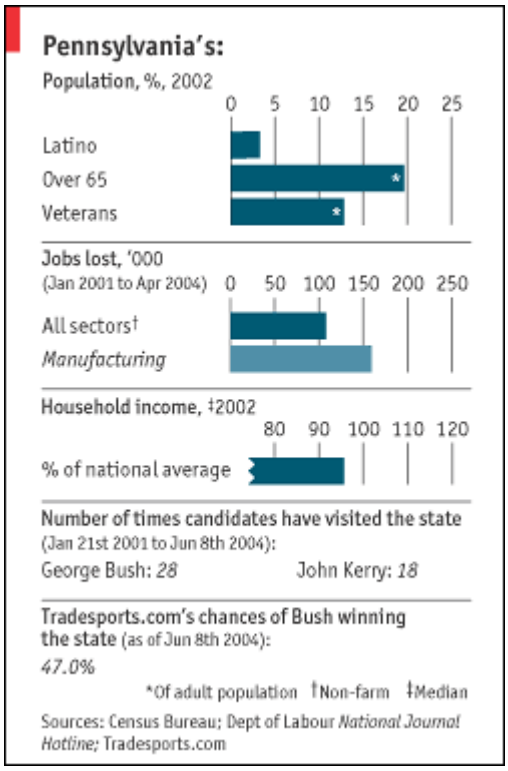
Western Pennsylvania is “Deer Hunter” country: home to fiercely patriotic Reagan Democrats who loathe the liberal wing of the Democratic Party but who tend to be the first to suffer when the economy turns down or a war goes badly. Pennsylvanians are already over-represented not just in the list of casualties but also in the list of people involved in prisoner abuse in Abu Ghraib.

The third factor is Teresa Heinz Kerry. As the widow of a popular local (Republican) senator and arguably the most powerful philanthropist in the state, Mrs Kerry carries huge clout, particularly in the fiercely contested western part. The Heinz name is omnipresent in Pittsburgh: there is a Heinz Field, a Heinz museum, a Heinz convention centre, and a plethora of charitable endowments that are charged with improving the quality of life in the city. Mrs Kerry has won general praise for the efficient way she has run the Heinz charities, and is said to have raised a lot of money for her husband's campaign among Pittsburgh Republicans.

So should Mr Bush forget about Pennsylvania? Though Republicans are clearly on the defensive at the

moment, they insist that the state remains winnable. They point out that this is not really one state, but three: greater Philadelphia, greater Pittsburgh and “Alabama”, the sprawling rural area in the middle. The Democrats may have a stranglehold on Philadelphia, with its large populations of both minorities and liberal professionals. But the Republicans dominate “Alabama”. And Pittsburgh tends to swing with the national mood.

The other reason is that figures for party affiliation are pretty meaningless. The “Democrats” in western Pennsylvania are more likely to vote Republican than the “Republicans” in the Philadelphia suburbs. The Republicans hold both the state's Senate seats and have a 12-7 advantage in its congressional delegation. They also control both houses of the state legislature as well as two of the state's top jobs, attorney-general and treasurer. Besides all this, the Republican Party machine is infinitely more sophisticated than the one they had in 2000, with an army of grass-roots operatives and campaigns tailor-made for the different regions.



The biggest problem for the Republicans is not so much lack of enthusiasm among their supporters as an excess of it. Pennyslvania is home to a hardline conservative movement that is fiercely anti-tax and pro-religion. The state's junior senator, Rick Santorum, is a darling of social conservatives and a fierce critic of liberal ideas such as gay marriage.

The power of the Republican right is arguably a serious problem for the party. This is not just because it creates distracting divisions, but also because it gives the impression that the Republicans are outside the suburban mainstream. In 2000, Mr Gore won 55% of the vote in several suburbs (such as Bucks, Chester and Delaware) that have been voting solidly Republican since William McKinley was in the White House and that cast only 30% of their votes for Michael Dukakis in 1988.

These moderate Republicans have long resented the influx of gun-toting, Bible-bashing “Alabamans” into their party. The big question in this year's election is whether their worries about national security will persuade them to put aside their doubts about Mr Bush's Alabaman-style social conservatism.

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Lexington

The Schwarzenegger touch

Jun 10th 2004
From The Economist print edition

And why George Bush needs to acquire it

THE governor of California, complete with black shades and leather jacket, roars into the Los Angeles Convention Centre on his deep-throbbing Harley. A quick dismount, a stride to the microphone, a flash of the trademark grin to a packed audience of 5,000: “Thank you for changing the constitution of the United States of America—and I accept the nomination for president. Oops, wrong speech!”

Ah yes. That pesky Article II, Section 1 of the constitution: “No Person except a natural born Citizen...shall be eligible to the Office of the President.” On the assumption that a constitutional amendment proposed by Utah's Senator Orrin Hatch goes nowhere, Austrian-born Arnold Schwarzenegger, having fun at the April meeting of the Travel Industry Association of America, is never going to follow Ronald Reagan, that other actor turned California governor, from Sacramento to the White House.

But perhaps that same party should endorse him as a role model for its current candidate. After all, some seven months after becoming governor of deeply indebted California (the world's sixth-biggest economy, as its officials like to emphasise) the Terminator's poll-ratings are virtually in the stratosphere. By contrast, George Bush is in a slump; his approval scores are now in the 40s.

The big reason for the president's malaise is, of course, Iraq. But another factor is at work. Mr Bush is a president with a proven ability to make half the electorate loathe him even as the other half strives still to love him. Having come into office promising to unite the country, he has succeeded merely in polarising it. That is why it is instructive to compare and contrast Mr Bush with Mr Schwarzenegger.

Both men have a popular touch that John Kerry, the Democratic candidate, can only envy (though he, too, has been seen on a Harley on the Jay Leno show). The governor rides his “Harley Hog” at the weekends; the short-sleeved president presses the flesh of Hog-riding Vietnam vets gathered in the White House drive. The governor lends his name and presence to a bodybuilding contest in Ohio; the president gets the NASCAR vote with a visit to the Daytona 500.

The big difference is in their practice of politics. Whereas both pledged in their election campaigns to “reach across the aisle” to their Democratic opponents, it is only the governor who has followed through.

Where Mr Bush clings to his ideological base, Mr Schwarzenegger not only has friends and relations who are Democrats but knows how to work with them, too.

Proof of that came this spring with Propositions 57 and 58, which sought the voters' permission to raise $15 billion in bonds to keep the state solvent while simultaneously capping future spending. Republicans hated the idea of going still further into debt; Democrats loathed the idea of limiting spending; the public at large were sceptical. Yet once Arnold started campaigning for the initiatives, their seemingly certain defeat turned into a convincing victory in the March ballot.

Was that a triumph of Hollywood charisma? To a degree, yes. Even Sacramento politicians admit to being a little awed by the man they laughingly call the “Über-narcissist”. But there is more to it than that. Mr Schwarzenegger first enlisted the support of the state's Democratic chief financial officer, Steve Westly. Then, crucially, he won Dianne Feinstein to the cause. For the sake of the greater good Mrs Feinstein, California's senior Democratic senator, found herself sharing platforms and swapping smiles with the Republican governor. That victory on 57 and 58 then paved the way for April's victory on workers' compensation. The threat of another Schwarzenegger-backed popular initiative was enough to persuade the unions, the bosses, the insurance companies and Sacramento's rival politicians that they had best find a compromise while they still could—and while the governor was still handing them expensive cigars.

This is not just a question of effective political tactics. Mr Schwarzenegger's politics are different, too. Where the Bush brand of Republicanism is a product of the conservative, religious south, the Schwarzenegger sort goes back to a “big-tent” party that did not assume that only pro-lifers and Bible-readers qualified as real Republicans. Where Mr Bush portrays gay marriage as a threat to society, Governor Arnold treats it almost as an irrelevance: let the law be changed if the people want. As to abortion, a key issue for Mr Bush's born-agains, the governor is firmly pro-choice. Potential opponents may not like this; but they fall into line because they know that, if thwarted, movie-star Arnold can go straight to the people and convince them that he knows best.

Straddling the middle ground

Of course, California is not Iowa; it has a crazy, happy-go-lucky side. But in some ways, it mirrors the rest of America. It displays deep antagonism between Republican and Democratic politicians, geographical divisions between left and right, and a middle ground ignored by the professional politicians. The reason why an iron-pumping movie-star so easily vanquished the professional politicians in California's recall election is that he seized that middle ground, which in normal Republican primaries would not have existed.

To secure that middle ground for Mr Bush, it would surely help if Mr Schwarzenegger campaigned around the country on his behalf. The trouble is, he will not. He told the *California Journal* that while he might campaign nationally for Republicans in close Senate and House races, he would not do so for the president outside California. Clearly, Mr Schwarzenegger's Republican Party is not Mr Bush's. It resembles far more the party of that other tolerant, charismatic governor of California whose name was on everyone's lips this week.

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Brazil's foreign policy

A giant stirs

Jun 10th 2004 | BRASÍLIA
From The Economist print edition

Brazil is bidding for big-power status. What sort of power does it want to be?

IT IS a small force, but of huge symbolic significance. This month, 1,200 Brazilian troops arrived in Haiti, the country's biggest foreign military deployment since the second world war. Brazil is commanding a United Nations peacekeeping force of 6,700 mainly Latin American troops and 1,600 police which is taking over from American and French forces in the Caribbean island. This marks a new departure. Brazil has long been a gentle and introverted giant, content to be a bystander on the world stage. Now that is changing.

Luiz Inácio Lula da Silva, the country's left-leaning president, is carving out a role for Brazil as spokesman for poor countries, most notably by founding the G20 group which lobbies for rich countries to open up farm trade. His government is playing a more active role across South America. And it is seeking a permanent seat on the UN Security Council. “Brazil has begun to flex its muscles as a regional superpower,” says Miguel Díaz of the Centre for Strategic and International Studies, a Washington-based think-tank.

If so, it is a paradoxical one. On the one hand, Brazil's fondest wish is to mitigate the United States' dominance of global affairs and thereby to enhance Brazil's influence. The foreign minister, Celso Amorim, calls for “a more balanced world” and justifies the Haiti mission in part as a step towards it. “You can't be a supporter of multilateralism and when it comes to act say it's [too] dangerous,” says Mr Amorim.

On the other hand, Brazil's new activism often, though not always, coincides with the interests of the United States. Both countries want democracy and stability in places in the Americas where these seem fragile. In some of those places, Lula's Brazil has more friends and influence than George Bush's more abrasive United States. The two sometimes back rivals in these countries, but that is one source of Brazil's usefulness.

Take Venezuela, where relations between the populist president, Hugo Chávez, and the United States are tense. Brazil formed a “group of friends” (to which the United States belongs) to encourage a lawful resolution of the confrontation between Mr Chávez and the opposition. The group has had a low profile, often to the point of invisibility. But Mr Amorim is “pretty convinced that we helped create the conditions”

for last week's decision by Mr Chávez to submit to a recall referendum (see article).

In Bolivia, where street demonstrations drove out a pro-American president last year, Brazil is encouraging still-restive radical leaders to play by democratic rules. Lula's own rise, from shoeshine boy to president, has a persuasive effect, Mr Amorim believes. Evo Morales, a leader of the movement that ousted Bolivia's president, calls Lula “a brother.” But the United States sees Mr Morales, the leader of the coca workers, as an ally of drug-traffickers.

Brazil was deeply suspicious of Plan Colombia, the American aid programme aimed against guerrillas and drug traffickers. But it has come to fret about the spillover of Colombia's conflicts—guerrillas have clashed with Brazilian troops on the border, and much of the violence in Brazil's cities is now drug-fuelled. So Lula's government has shifted to a policy of closer co-operation with Colombia's president, Álvaro Uribe, the United States's closest ally in Latin America. Brazil is sharing with Colombia's government intelligence from Sivam, its satellite-based monitoring system for the Amazon. It has also offered to host talks between government and guerrillas should these occur.

Co-operation and friction

Brazil is taking “more responsibility for calming things down in the region, which the United States finds fantastic,” says Alfredo Valladão of the Institut d'Etudes Politiques in Paris. That is one reason why Brazil has not been shunned by Mr Bush, despite Lula's opposition to the war in Iraq. But on some issues there is friction.

Brazil refused to allow international inspections of its centrifuges for enriching uranium. A signatory of the Non-Proliferation Treaty, it claims to have impeccable credentials as a custodian of nuclear technology and says it is not obliged to reveal technology that could be swiped by competitors (though there are suspicions that some of this technology may have come from the same black market tapped by Libya, Iran, North Korea and others). But to a United States determined to plug leaks in the international non-proliferation regime that “could be a very sore point,” says Peter Hakim of Inter-American Dialogue, a think-tank in Washington. Brazil “never said it would not sign” the protocol mandating inspections, says Mr Amorim—a glimmer of conciliation, perhaps.

Lula did not start Brazil's international activism. In recent years, Brazilian troops have joined UN missions in East Timor and Angola. In 1996 Brazil acted with Argentina and the United States to forestall a coup in Paraguay—a recognition that the defence of democracy in the region should take precedence over a tradition of non-intervention in the affairs of neighbours.

The search for a stable South America has long been an axiom of Brazil's foreign policy, but demographics have given it greater urgency. Brazilians, once described as clinging to the coast like crabs, have scurried westwards and northwards. The building of Brasília, which replaced Rio de Janeiro as the capital in 1960, helped to spark development of the interior, a process accelerated by an agricultural boom in such western states as Mato Grosso. The Amazon, Brazil is learning, is both a resource and weak spot, vulnerable to guerrillas, drug traffickers and land-grabbers.

For most of its history as an independent country, Brazil saw Argentina as its chief rival and strategic threat. That changed with the formation of Mercosur, an incipient customs union also involving Paraguay and Uruguay. This has allowed Brazil to shift much of its army from its southern border to the north-western jungles near Colombia and Peru.

Brazil's sense of neighbourhood may be widening. Yet, argues Mr Valladão, Brazil has not decided what sort of neighbour to be. At times, it portrays itself as a team player. In theory, it negotiates on trade as a member of Mercosur. But Brazil also sees itself as a “whale”, with the heft and appetite to act on its own. Mr Amorim's answer is that, in a world likely to be dominated by blocks, Brazil's best option is to co-operate as much as possible with its neighbours and other developing countries. Whales, he notes, “are gregarious animals.”

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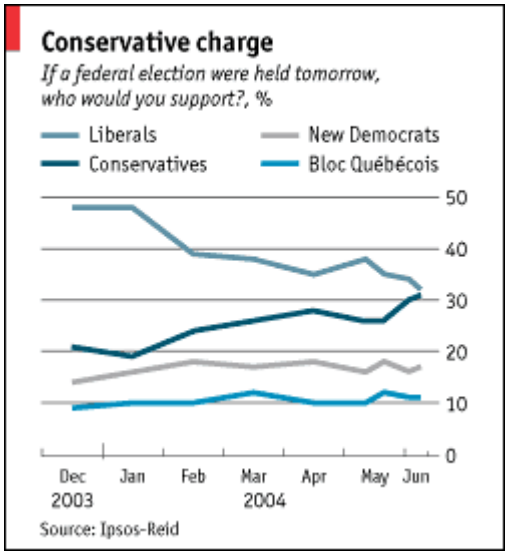
Canada's election

Harper's hour

Jun 10th 2004 | OTTAWA
From The Economist print edition

The Conservatives have turned the campaign upside down



AS RECENTLY as January, Paul Martin, Canada's prime minister, was so confident of winning a comfortable majority for his Liberal Party that he was talking of a ten-year programme of reform. When last month he finally called an election for June 28th, polls suggested the Liberals might be reduced to a minority government. Such has been the turnaround in political sentiment, at the midpoint of the campaign this week it was Stephen Harper, the Conservative leader, who looked more likely to form Canada's next government, albeit a minority one. The Conservatives have closed the gap in the opinion polls (see chart); in Ontario, with 106 of the 308 seats in the House of Commons, they now lead the Liberals by 35% to 32%.

Almost everything has gone right for Mr Harper. He leads a party that emerged only in March from a hurried merger between the western-based, socially conservative Alliance (previously the Reform Party) and the eastern rump of the more centrist Progressive Conservatives. The merger caused several defections. Yet, surprisingly, the Conservatives have appeared more cohesive than their main opponents. Mr Martin's campaign to oust Jean Chrétien from the premiership left deep wounds in their party. Mr Martin, for ten years Mr Chrétien's finance minister, has been hurt in Quebec by a sleaze scandal dating from the 1990s. In Ontario, he has been hit by the provincial Liberal government's budget last month, which broke a promise not to raise taxes.

Mr Harper, aged 45, can claim far more convincingly than Mr Martin, 20 years his senior, to be a fresh face. He has shrewdly capitalised on the Liberals' woes. While the prime minister has seemed panicky as he pleads for trust, the Conservative leader's lack of charisma has come to look like integrity. At rallies, he calmly reads out whole passages of his speeches. When a television reporter asked him to repeat on camera a few sentences “with feeling”, he shot back “I don't do feeling.”

Mr Harper has risen steadily. In 1993, he was elected as an MP for Reform, an Alberta-based party he had helped to found. He ran the National Citizens' Coalition, a conservative lobby group. In 2002, he was chosen as the Alliance's leader. The merger was very much his doing.

The Liberals have tried to portray Mr Harper as a rabid social conservative. That tactic worked against two previous Reform leaders. But it seems to be failing this time. When his party's health spokesman suggested that women should be offered counselling before having an abortion, he said that was not his view. Similarly, he distanced himself from a suggestion that the federal government should reduce its support for French as an official language.

Reuters

But Mr Harper's biggest weakness may be his unconvincing economic arithmetic. Perhaps he thinks so too: he released his party's programme at lunchtime on Saturday June 5th, which ensured it got little immediate attention. It calls for big rises in military spending, and even more generous transfers to the provinces for health care than the Liberals offer. In all, Mr Harper would spend an extra C$58 billion ($42 billion) over five years, against the Liberal's promised C$27 billion. Yet Mr Harper says he would also cut taxes. His programme assumes federal fiscal surpluses of double the amount calculated by Mr Martin, a

prudent finance minister who promises not to allow Canada to slip back into deficit financing.

This platform may not stand up to close scrutiny. Mr Martin's best chance of stopping Mr Harper's remarkable momentum will come in two television debates (one in English, the other in French) next week. Have the Conservatives peaked too soon? No, insists Mr Harper. He says that a campaign is “like a 100-yard dash, you've got to run all-out the whole time.”

Harper at his most emotional

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Venezuela

The next round

Jun 10th 2004 | CARACAS
From The Economist print edition

Will a recall referendum be clean?

Get article background

IT IS official: Venezuela's combative populist president, Hugo Chávez, is to face a mid-term recall referendum on August 15th. But the jubilation that broke out in the ranks of his long-suffering opponents was already beginning to evaporate even before the official announcement by the National Electoral Council (CNE) that enough signatures had been gathered to trigger the referendum. Mr Chávez has promised a two-month war of attrition against the opposition, whom he describes as “fascist oligarchs” obeying orders from “foreign masters” in the United States. And the CNE, whose board has a pro-government majority, began placing booby-traps in the opposition's path.

First, it broke a hard-won agreement that the referendum should be held on August 8th. By adding an extra week's (unexplained) delay, the CNE has placed the polling date uncomfortably close to the cut-off point—August 19th—after which defeat for Mr Chávez would not trigger a fresh presidential election. Instead, his appointed vice-president would serve out the remainder of his term (which ends in January 2007), with Mr Chávez no doubt remaining in charge. That would hardly be the outcome the opposition Democratic Co-ordinator alliance has been struggling for since 2001.

Second, the CNE declared that the vote would be fully automated, with no mention of a simultaneous audit of paper ballots. Touch-screen voting machines are being supplied by a previously unknown company (run by Venezuelans out of an apartment in Florida); they have never before been used in an election. The supplier of the software is part-owned by Mr Chávez's government, and has a government appointee on its board, according to company registration papers. The opposition worries about electronic fraud—or a system collapse that would postpone the referendum. To cap it all, the government has launched a massive drive to hand out identity documents and “clean up” the electoral register.

The opposition also faces difficulties of its own making. The Co-ordinator is a cumbersome coalition, with no clear leader and no agreed platform. Some of its members supported a coup attempt against Mr Chávez in 2002; many others are convinced democrats. It is in poor shape to face a presidential election. Yet the constitution requires that this be held just 30 days after the president's dismissal. Should it hold primaries to elect a candidate before August, risking turning the event into a premature election? Or hope the voters will eject Mr Chávez regardless of the absence of a clear alternative?

In the president's own camp there are divisions, too. Hardliners want a purge of “counter-revolutionary” opportunists. Mr Chávez has thrown them a few rhetorical crumbs. In agreeing to the referendum he has bowed to international pressure and, perhaps, the views of senior army commanders. But he will not give up without a fight—and probably a dirty one.

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Colombia's conflicts

Talking, again

Jun 10th 2004 | BOGOTÁ
From The Economist print edition

Peace, perhaps, with the ELN guerrillas

Get article background

AFP

Paroled for a day

ON JUNE 4th a bearded visitor came to Colombia's Senate to denounce the problem of landmines and to call for an end to the country's violence. The speaker was Francisco Galán, a jailed leader of the Cuban-inspired National Liberation Army (ELN), the first guerrilla to address the Senate in 40 years of armed conflict. He was granted parole for a day, as part of an agreement to launch peace negotiations with President Álvaro Uribe's government.

That agreement was hatched at talks between Mr Uribe and Vicente Fox, Mexico's president, in the margins of last month's summit of European and Latin American leaders in Guadalajara. The ELN, it is said, does not want to talk to Mr Uribe directly (though Mr Galán met his vice-president). Mexico has agreed to act as a mediator. The first step will be to agree a venue and timetable for the talks.

A previous (though far from the first) peace effort involving the ELN, the smallest of Colombia's three illegal armies, collapsed in 2002. Will things be different now? The ELN, with about 5,000 fighters, has been militarily defeated. The army, which has taken the offensive under Mr Uribe, has all but eliminated the group from its former strongholds of eastern Antioquia and Arauca; right-wing paramilitary vigilantes had earlier bloodily expelled the guerrillas from Barrancabermeja, a northern oil city. Last year, 405 ELN members deserted. Its once-substantial sympathy among the European left has waned: the European Union declared the ELN to be a terrorist group after it kidnapped eight foreign backpackers last year.

All this leaves the ELN with two options: negotiate disarmament and a political future; or be taken over by the larger FARC guerrillas. But the two groups are at odds ideologically and, in places, militarily. Unlike the FARC, the ELN has largely steered clear of drugs.

For Mr Uribe, the talks offer the chance to disarm a rebel force, albeit a diminished one. They would help, too, to dispel claims that he is open to negotiations only with the paramilitaries (these began last year). But there are risks, too. Beyond insisting on a ceasefire, the government seems to have little idea how to conduct the talks. A presidential adviser said this week that it was far too early to talk about assembly areas for the guerrillas, let alone the specifics of demobilisation. Oddly, Mr Uribe has left the details to Mexico; the UN might have been a better bet. The guerrillas want a government ceasefire, and amnesty for their prisoners. The start of talks is a hopeful sign—but peace with the ELN is still some way off.

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Shipping in South-East Asia

Going for the jugular

Jun 10th 2004 | SINGAPORE
From The Economist print edition

The Strait of Malacca, through which a quarter of the world's maritime trade passes, makes a tempting target for terrorists and pirates

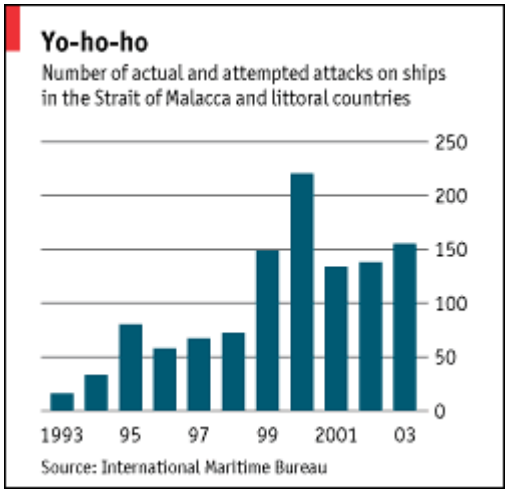
FACING west from Singapore's shores, it is hard to make out the Strait of Malacca, thanks to all the boats and islands scattered across the water. An endless procession of tankers, container ships, tugs, fishing boats, ferries and cruise-liners sails between tiny islets, through a shipping lane that narrows to as little as one and a half nautical miles at one point. Some 50,000 vessels, carrying roughly a quarter of the world's maritime trade, pass through the strait every year. So do about half of all seaborne oil shipments, on which the economies of Japan, China and South Korea depend. If terrorists were determined to devastate the world economy, it would be hard to find a better target.

So, at any rate, reasoned many of the participants at the Shangri-La Dialogue, a regional security conference organised by the London-based International Institute for Strategic Studies in Singapore last week. Tony Tan, Singapore's deputy prime minister, pointed out that a ship sunk in the right spot, where the sea lane is only 25m deep, “would cripple world trade”. He also raised the possibility of hijacked ships being turned into “floating bombs” and crashed into critical infrastructure such as oil refineries or ports. Donald Rumsfeld, America's secretary of defence, stopped in at the conference to push the “regional maritime security initiative”, whereby America would help South-East Asian countries defend against such attacks.

Maritime terrorism is certainly not unheard of. Muslim militants in Yemen blew a hole in an American warship, the *Cole*, in 2000, and another in a French oil tanker, the *Limburg*, in 2002. The same year, authorities in Morocco arrested a group of suspected terrorists planning attacks on British and American naval ships in the Strait of Gibraltar. Abu Sayyaf, a terrorist outfit from the southern Philippines, claimed responsibility for bombing a ferry in Manila Bay earlier this year.

But the evidence that terrorists are targeting shipping in the Strait of Malacca remains fairly flimsy. In 2001, American forces in Afghanistan found a video tracking the movements of Malaysian naval vessels. Singaporean authorities say they have arrested terrorist suspects who confessed to planning an attack on visiting American ships, among other potential targets. Some Singaporean officials also make much of a puzzling hijacking earlier this year, when pirates seized a chemical tanker in the strait, and abandoned ship after an hour. The incident might, they postulate, have been a dummy run for a future floating bomb attack.

Joshua Ho, of Singapore's Institute of Defence and Strategic Studies, argues that it would be difficult for terrorists to disrupt shipping in the strait. It is hard, he points out, to sink a ship in a precise spot. Last month, it took a freighter loaded with South Korean cars six hours to sink after a collision there. By the time she finally foundered, Singaporean tugs had towed her out of the shipping lane. Fuel tankers, which feature prominently in many doomsday scenarios, are robustly constructed and do not carry their cargo in volatile forms, for obvious reasons.



On the other hand, the pervasiveness of piracy in the area proves that shipping is vulnerable to less apocalyptic assaults. The Strait of Malacca and its littoral countries account for about a third of all pirate attacks in the world. The number of such attacks has tripled over the past decade (see chart). In the first week of June, for example, a tug and barge disappeared on their way to Port Klang in Malaysia, armed robbers looted a tanker in Indonesian waters, and crews repelled two other attacks in the strait itself.

Analysts attribute this increase in piracy to ordinary Indonesians impoverished by the financial crisis of 1997, or rebels from the restive province of Aceh, at the northern end of the strait. They tend to loot smaller ships for valuables, or hold their crews for ransom. But there are also more sophisticated pirates, who steal whole tankers and their cargoes to order, and who might be recruited by terrorists.

At the moment, the strait is relatively poorly monitored, especially north of Port Klang, where the sea lanes widen. The cash-strapped Indonesian navy has perhaps 20 seaworthy patrol boats, to guard an archipelago of 17,000 islands. Singapore and Malaysia are richer and better equipped, but have no right to pursue ships into Indonesian waters. Singaporean sailors say that when they pass information to their Indonesian counterparts, it disappears into a black hole.

Malaysia and Indonesia have already rejected the idea of American patrols in the strait or rapid-response units at the ready, both out of prickliness about sovereignty and for fear of inflaming anti-American feelings among their citizens. But they say they would accept American help in the form of advice, equipment and training. The International Maritime Organisation, the United Nations body that regulates shipping, has ruled that all vessels over 300 tonnes must install a tracking system by the end of the year.

Thailand, meanwhile, has come up with a scheme to bypass the Strait of Malacca altogether. The government originally toyed with the idea of building a canal through the narrow Isthmus of Kra, which would cut over 1,000km (620 miles) off the sea route from the Middle East to Japan. But, now, it is pushing a cheaper alternative: a “land bridge” consisting of oil and cargo terminals on either side of the isthmus, connected by pipelines, roads and railways. In addition to the benefits in terms of security, the scheme could cut between 40 and 60 cents per barrel off the cost of shipping oil to East Asia. A sensible enough idea—were it not for the fact that southern Thailand is grappling with terrorist troubles of its own.

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Japan

The doctors' dilemma

Jun 10th 2004 | TOKYO
From The Economist print edition

A health-insurance scandal shows how Japan's iron triangle is weakening

WHAT is Japan's most powerful interest-group? Farmers, postal workers and construction firms are always high on the list. But most people outside Japan underrate the power of two ferocious pressure-groups: its doctors and dentists. A recent bribery scandal—five members of the Japan Dental Association (JDA) were indicted last month—has given the public an X-ray view of these lobbies' efforts to influence medical policy.

As with Japan's other traditional lobbies, however, dentists and independent doctors are gradually being overpowered by a range of new groups backing broader national interests. The battle over medical fees offers a case study of the forces that are prising open Japan's infamous iron triangle of narrow private interests, politicians and bureaucrats.

Long before the recent bribery scandal, the Japanese were telling opinion pollsters of their unhappiness with the health system. Patients complain most about waiting times and limited information. A study published in 2000 by the McKinsey Global Institute, a think-tank tied to a business consultancy, found pitifully low productivity in Japan's health-care system, compared with America, Britain and Germany. Even after a decade of recession, a 2002 government survey found that voters still worried more about health care than about jobs and incomes. The most popular television drama during the past season was “Shiroi Kyoto”, a hospital drama in which infighting and corruption run rife among the medical staff.

Distorted fees are behind many of the problems. The five JDA members who were indicted are charged with bribing two members of the national medical council that sets fees for everything from surgery and specialist visits to routine check-ups with a doctor or dentist.

Even apart from the bribery scandal, the JDA and its counterpart for doctors, the Japan Medical Association (JMA), have long exerted strong influence over the fees dished out for medical services. The fee-setting council, for example, is made up of doctors and health-insurance associations, without any representation for patients. The health insurers do little to check the doctors' clout. All Japanese are covered under the country's universal insurance scheme, and the health-insurance associations merely administer the claims. Although they care about the system's overall financial cost, they have little incentive to press for sensible relationships between the fees charged for different services.

The independent doctors' influence, says James Kondo of the University of Tokyo, has resulted in inordinately high fees for regular visits and other simple services, leaving many specialist treatments and other services relatively under-financed. “Japan is the only country”, says Mr Kondo “where a general practitioner can earn much more than a heart specialist.”

Efforts to reform health-care policy have largely ignored this problem. After taking office in 2001, Junichiro Koizumi moved quickly to tweak the other side of the health-care ledger: the share of insurance payments that individuals must make themselves. Although this was useful, it affected only the source of the money. Changing the fee structure, by contrast, would affect which medical areas the money goes into. Mr Kondo thinks that the JMA and the clinic-owning doctors who dominate it are losing their clout. As their influence over fees weakens, more resources will begin flowing into promising areas of modern medicine.

The old system certainly seems under threat, with new groups pulling apart the iron triangle at all three corners. In the medical industry, the JMA must fend off a range of hospital-based doctors and medical-technology companies, all of which want more resources to flow towards new areas of health care. At the second corner of the triangle, politicians now must heed patients' groups, which are doing their best to

stoke national awareness. The media are pitching in by highlighting an endless litany of medical scandals, ranging from tragic episodes of malpractice (complete with attempted cover-ups) to the recent bribery allegations. In a trend that has accelerated during Mr Koizumi's three-year tenure, such national electoral issues are weakening lobbies, such as the JMA, which have long used their money and dedicated voting blocks to sway the outcome of elections in individual districts.

The popular Mr Koizumi has also been pressing for change at the third corner of the iron triangle: in the bureaucracy. The prime minister has been trying to wrest policy away from individual ministries, which tend to be beholden to the sectors they regulate, and instead co-ordinate it within his own cabinet office. Many of his advisers on medical policy view health care as a potential growth industry, which can generate jobs, investment, exports and widespread public (and therefore voter) satisfaction. The real scandal is that the narrow interests of Japan's doctors' lobby have so long thwarted these advances.

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American troops in Asia

Fewer but deadlier

Jun 10th 2004 | TOKYO
From The Economist print edition

A strategic upgrade on the cold war's last frontier

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AFP

Overhauled, and ready for home

THE cuts have been discussed extensively since last summer, but fresh news about American troop deployments was bound to create a sensation in South Korea. The Pentagon confirmed this week that it has firmed up plans for overhauling America's bases on the peninsula, as part of a global review of its forces. The Americans hope to remove roughly a third of their 37,000 troops by the end of 2005. Other changes are expected in the region, including Japan, where 45,000 American troops are based.

Since the United States maintains a tightly knit alliance with South Korea to deter the North's 1m-man army, its planners have been consulting closely with their hosts about the overhaul. Nevertheless, South Korean officials appeared to be slightly surprised this week, both by the steepness of the planned cuts and by the speed with which the troops are to be withdrawn. Cho Yung-kil, the defence minister, suggested that South Korea would soon make a counter-proposal, implying that America's plans were not satisfactory. The South Korean media promptly went into overdrive.

America insists that the planned cuts will not weaken its commitment to defend the South. They can best protect their ally, the Americans say, by positioning their forces in ways that most effectively deter North Korea. The planned changes flow from a global overhaul that Donald Rumsfeld, America's defence secretary, has publicly championed. The United States will rely more heavily on air power and long-range weapons in its military planning for the peninsula. American officials also point out that South Korea boasts one of the world's best fighting forces, with 690,000 troops. And to reassure the South Korean public, America has trumpeted its plans to spend $11 billion over the next three years on upgrades that will make the South even safer.

Robert Karniol, Asia-Pacific editor for *Jane's Defence Weekly*, agrees that the troop cuts will not weaken South Korea's security. Neither can they be construed as some sort of reprisal for awkward relations between the Bush administration and Roh Moo-Hyun, South Korea's president. Although Mr Rumsfeld takes credit for the overhaul, says Mr Karniol, it carries out a long-planned change that was ordered by America's Congress in 1989 (as part of the Nunn-Warner amendment). The amendment led to a cut of 7,000 troops in 1991, and called for two further rounds of cuts and consolidations, with no specific target for a final troop level. The second and third rounds were placed on hold in the early 1990s, because North Korea was trying to develop plutonium-based nuclear weapons. The two allies are still holding separate talks on moving bases, including the huge Yongsan garrison in southern Seoul.

Mr Karniol argues, however, that the promise of $11 billion is misleading. Although some of the money will be spent on better command and control systems in South Korea, much of it will go towards programmes that boost security across Asia. This includes deploying long-range bombers on Guam, and stationing rapid-deployment forces at bases in South Korea. More nimble forces on the peninsula will benefit South Korea as well as potential Asian hot spots, says Mr Karniol, “but most of them can be gone in a week.” Now, that is something that would guarantee headlines for years.

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Nepal

Divide or rule?

Jun 10th 2004
From The Economist print edition

A reappointed prime minister fails to break the impasse

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APPOINTED this month by the king to a third term as prime minister, Sher Bahadur Deuba is not enjoying much more luck than in his previous stints. His reinstatement has not yet led to a breakthrough in Nepal's three-cornered struggle between the monarchy, the political parties and Nepal's Maoist insurgents.

For more than two months, Katmandu has seen daily protests by the political parties against the increasingly autocratic rule of King Gyanendra, who sacked Mr Deuba in October 2002. Since then the king has picked his own prime ministers, the second of whom resigned last month. The parties failed to come up with a joint candidate to replace him.

They are now split on whether to back Mr Deuba's new government. Chakra Prashad Bastola, of the Nepali Congress, rules it out, arguing that there has been no “qualitative change”—Mr Deuba is just another unconstitutional royal placeman. But Madhav Kumar Nepal, leader of the other big party, the Unified Marxist-Leninist communists (UML), sees this as “an opportunity to move forward”. The UML will support Mr Deuba if he “strengthens democracy”, sets up a forum to consider constitutional changes, and takes the peace process with the Maoists forward.

That is indeed the most urgent need. Maoist insurgents control much of the countryside, and fighting them for eight years has already cost 9,000 lives. They demand an appointed constituent assembly to amend the constitution. Prakash Sharan Mahat, a leader of Mr Deuba's party, says the prime minister will offer talks to the Maoists and urge them to contest an election—almost certainly a forlorn hope.

India's new foreign minister, Natwar Singh, this month made Nepal his first foreign call since taking office and urged compromise on king and parties. India has a big influence in Nepal, but even it may be unable to stem its slide into becoming the region's next failed state.

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China

Poor payers to a degree

Jun 10th 2004 | BEIJING
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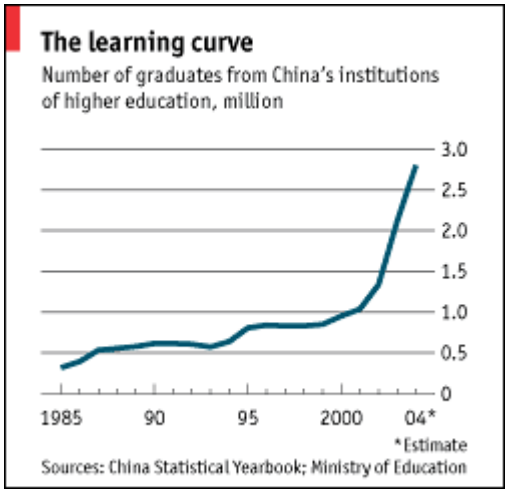
Students are struggling to cover their loans

FOR many of the 2.8m Chinese who will graduate from university in the coming weeks, the country's surging economy will be of little consolation. They will hunt for jobs in a market saturated with degree-holders. Those from poor families who have paid their way through college with the help of subsidised loans will face an additional problem: a bad credit record as they struggle to repay their debt.

So widespread have defaults on student loans become that Chinese banks in the past few months have ceased extending such credit at more than 100 universities (about 10% of the total), *China News Weekly*, a state-owned publication, reported last month. It said that some 20% of students failed to repay their loans on schedule after graduation. In a country seemingly awash with money-making opportunities for bright young people, why should this be happening?

Five years ago, China introduced two crucial changes in its higher-education policy. The most trumpeted was a decision to expand the number of university places in order to make tertiary education far more accessible. As a result, the number of new graduates this year will be more than triple the number in 1999 (see chart).



The other change was to order state-owned banks to lend money to students to help them pay college fees and living expenses. For students from poor families, some 20% of total enrolment, half of the interest on the loans would be paid by the government.

Since 1999, some 800,000 such students have taken out subsidised loans. For an entire four-year course, a typical loan would total around $3,600. The money lent mostly goes directly to the universities, with only a small amount for subsistence given to the students.

Last year marked the first major influx of loan recipients into the job market. It was also a year of record graduate unemployment. Jobs were available, but not of a kind that matched the high expectations of the graduates. Their pampered predecessors, thanks to the then rarity of a university education, had been sailing effortlessly into prestigious, well-paid positions.

Last year, the average starting salary of university graduates dropped by 40% compared with 2002, according to the Chinese media. No wonder some who had borrowed money ran into difficulties. The repayment period for the loan is short—four years after graduation, with the first instalment due within six months, on average, of leaving university. A study published last year by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) suggested that an average-earning graduate who had borrowed $3,600 would have to hand over 20-30% of annual salary to cover the principal and interest. The default ratio in China is at least double that commonly found among graduates in other developing countries, the report indicated.

Li Wenli of Peking University, who helped to write the UNESCO study, says part of the problem is “a lack of understanding among some students of how loans work”. Rather than wilfully defaulting, many simply neglect repayment schedules. Personal credit is a new business in China, and the discipline imposed by the fear of acquiring a bad credit history is sorely lacking. Not surprisingly, the banks, which have had no choice but to offer loans regardless of the financial background or earning potential of the borrower, are

wriggling out of the scheme.

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Marriage in China

Raise the red lantern

Jun 10th 2004 | BEIJING
From The Economist print edition

Colour is returning to weddings

IN THE dreary past, marriages in China were not so much celebrated as recorded. The happy couple would first need written approval from both of their employers and, with that in hand, would trudge along together to the local civil-affairs bureau to register their union. Likely as not, they would show up for work the following day, where they might celebrate with fellow workers by handing out some sweets.

Over the past decade or so, weddings have become increasingly festive as living standards have risen. A typical couple now pick a lucky date (days that are even-numbered in both the western and Chinese calendars are best) and prepare to spend a small fortune on rented limousines, fancy gowns, extravagant banquets, professional photographers and often an exotic honeymoon.

As much as weddings in China have changed, so too has marriage itself. Gay union may still be out, but looser attitudes towards sex, marriage and divorce have led to a more colourful national love life. As late as 1989, six out of seven newly married couples would not have had sex before the paperwork was complete. Now, as many as 70% of young adults in urban areas have indulged. These numbers, according to Li Yinhe, of the Chinese Academy of Social Sciences, reveal the arrival of a sexual revolution that was long overdue. Ms Li also reckons that the rise in the divorce rate—from 3% in the 1970s to 14% today—is a healthy development, indicating that unhappy couples are no longer discouraged from divorcing in the interest of “stability”.

Only late last year did China formally eliminate the need for employers to sanction weddings. The change was widely welcomed, but also inevitable since so many Chinese now work for private firms or foreign companies.

At the end of last year, China's Supreme Court laid out the procedures by which divorced couples should split their property. The rules not only cover such traditional items as betrothal gifts from families, but also joint assets such as all kinds of property, stocks and bonds. Previously, people had only a basic salary and few assets, and thus little to fight about in divorce proceedings. A majority of Chinese women now want prenuptial agreements—and public notaries are doing a roaring trade authenticating them.

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Iraq

A new way ahead?

Jun 10th 2004 | AMMAN AND SAVANNAH, GEORGIA
From The Economist print edition

By winning a resolution in the UN's Security Council, President Bush has given Iraq's new government a fillip. Will it be enough?

Get article background

IF YOU had said, after the United Nations refused to back America's invasion of Iraq, that not much more than a year later the UN Security Council would unanimously endorse America's handover to a sovereign Iraqi government, you would have seemed optimistic. If you had added that the Group of Eight biggest industrial countries at their summit on Sea Island, off the coast of Georgia, would at the same time endorse President George Bush's plan to encourage democracy in the Middle East, widely derided when it was first mooted (see article), you might have sounded wildly unrealistic. Yet this week, both things happened.

For sure, America had to make last-minute concessions. France and Germany had wanted to strengthen the interim Iraqi government's power over the American-led coalition forces. And they wanted a deadline for withdrawal. They got both.

In an exchange of letters between Ayad Allawi, Iraq's incoming interim prime minister, and Colin Powell, America's secretary of state, the pair spelled out the terms under which the coalition forces would operate. As embodied in the resolution, the letters make explicit that the forces are in Iraq only at the new government's request (ie, they could be kicked out). The resolution endorses a special military committee, to be chaired by Mr Allawi, which will determine basic security policy, “including policy on sensitive offensive operations”. This gives Iraqi forces a measure of independence from coalition control, since they would not have to engage in those sensitive operations, and in theory allows the interim government, in some circumstances, to wield a veto over American plans, though Mr Allawi says he cannot foresee wielding one.

On the other hand, the resolution lets the multinational force take “all necessary measures to [maintain] security” and to imprison people it deems a severe risk. In the American view, this is a workable compromise, granting Iraq sovereignty without imperilling American security. The UN's endorsement runs until the end of 2005, when the Iraqis are due to have a second general election, this time under a new constitution, to choose a full-blooded government; thereafter, the mandate could be renewed. So France's demand for some kind of a deadline has been met.

To complete the list of American concessions, Russia got its way with its request for the UN to call a special conference on Iraq, modelled on the one in Bonn on Afghanistan two years ago, to co-ordinate the giving of aid. The Americans said they would support the forgiveness of all debt to Iraq, which would be a massive help, but several big creditors demurred; France, in particular, remains loth to say goodbye to the prospect of getting back its cash.

The resolution also calls for a new and separate force to protect the UN's mission in Iraq, to which countries that balked at sending troops to serve alongside the Americans last year might now contribute. Germany's chancellor, Gerhard Schröder, who has ruled out sending any of his compatriots to serve with a NATO force in Iraq, mulled over the possibility of NATO helping to train the new Iraqi army or even assuming command of part of the multinational force. Mr Bush is keen for NATO to become involved. France's President Jacques Chirac is not at all.

Still NATO officials say that the UN resolution's passage may prod other countries, apart from the 30-odd already alongside the Americans in Iraq, into joining the fray. India and Pakistan, for instance, might now contemplate joining the coalition. The Americans certainly need more firepower. If this week's meeting can help arrange it, that will certainly give Iraq's new government a further big fillip.

Strongman or wrong man?

There has certainly been quite a turnround, on the ground, in Iraq—irrespective of the diplomacy in New York. Had the Americans announced, after Saddam Hussein's fall a year ago, that Ayad Allawi, a long-time exile but once an eager Baathist working for one of the Arab world's most repressive security services, was to lead the new Iraq, the hullabaloo would have resounded from Baghdad to Washington. Yet now, after a bloody year of insurgency and occupation, Iraqis have grown so desperate for a semblance of order that most of them have acquiesced with scarcely a murmur in the choice of Mr Allawi.

Moreover, many Arab leaders have been quick to welcome the appointment of a pro-American strongman as one of their own; Iraq's interim government, like many other Arab ones, has no shortage of former intelligence men and tribal figures. Jordan, where Mr Allawi formed his opposition group of alienated Baathists and security men, hailed him as Iraq's new hope.

Comrades in the Baathroom

Even Syria, which has watched Iraq with a baleful eye, has taken succour from his past membership of the Baath party, a version of which still reigns in Damascus. Moreover, most Arab leaders outside Iraq sounded relieved that liberals, such as the Sunni patrician, Adnan Pachachi, and Shia revivalists who might have looked to Iran for support were omitted from the new team's line-up. And few Arabs shed tears over the fall of Mr Allawi's rival, Ahmed Chalabi, denigrated across the Arab world as the buddy of Washington's hated neo-conservatives.

For Iraqis and outsiders alike, security is the chief prerequisite for the country's political and economic reconstruction, so Mr Allawi's expected robust approach, along with his intention to bring former Baathists and senior soldiers who served under Mr Hussein back into the establishment, could go down quite well. The UN resolution should help clarify the role of the forces, Iraqi and foreign.

But Mr Allawi has a long way to go. Iraq today is a failing state, where religious extremists have their own fiefs—for instance, in Sunni-dominated Fallujah, west of Baghdad, and in the capital's Shia suburbs. This week, Fallujah's *jihadis*, after fending off the Americans, declared that they were moving the battlefront to Baghdad. Days later Muqtada al-Sadr, the turbulent Shia cleric whose forces this month handed the holy cities of Najaf and Karbala back to the central government's control, echoed the call. Mr Allawi is already struggling to keep his government steady. His press officer, Ali Abdel Emir, fled the country this week after an assassination attempt.

In any event, some Iraqis doubt that Mr Allawi will make Iraq safe enough for a proper election as planned in January, after which his government is supposed to dissolve. But others think he might dig in too well. His Iraqi National Accord is run on old Baathist lines. Some fear he will cite insecurity as a reason for delaying a census and so delay the election itself.

Under the “transitional administrative law”, known as the TAL, a mini-constitution drawn up by the

Americans, Mr Allawi's government should do nothing “affecting Iraq's destiny beyond the limited interim period”. But even before his swearing-in on June 30th, Mr Allawi has flexed his muscles. He has issued a decree disbanding militias, though letting the Kurdish regional government keep its own *peshmerga* force. He has made a friendly visit to inspect the oil ministry's own 18,000-strong British-run militia, which he previously said he would abolish. And he has stressed his government's right to determine the future of foreign troops in Iraq. The Americans have further helped Mr Allawi by appointing several of his people, including the intelligence chief, Muhammad Shahwani, and the defence minister, Hazem Shaalan, to key security posts.

Nonetheless, Paul Bremer, the American proconsul, still has final authority in Iraq—until June 30th. After that, fewer constitutional constraints will prevail. Sovereignty is vested in the presidency, not parliament. Mr Allawi can rule by decree, provided that all three members of the presidency (a Sunni, a Shia and a Kurd) assent. The National Council, a mainly consultative body of 100 worthies who have yet to be chosen, will need a two-thirds majority to overturn such decrees. The council should broaden representation in Iraq's corridors of power through indirect elections, but Mr Bremer has decided to give a chunk of seats in the new body to all those members of the American-appointed but already defunct Governing Council who have not been given posts in the new government.

But the latest row concerns the Kurds, who backed Mr Allawi's selection and have a strong showing in the new government. This week they threatened to pull out of the new government and boycott the January election after the Americans appeased the Shia ayatollahs by omitting the secular TAL from the UN resolution. The Kurds fear that once the Shias win the election in January, as their numbers (60% of the population) suggest they should, the ayatollahs will scrap the TAL and remove the federal rights it grants to the Kurds.

Such rows are bound to occur. Mr Allawi may not be a paragon of democratic virtue. Iraq remains fragile and chaotic. But most Iraqis, in the short term, want security more than democracy. If Mr Allawi, with armed multinational help, can provide the former, the latter may, with a lot of luck, follow.

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Democracy for Arabs

The latest American initiative

Jun 10th 2004 | CAIRO AND SAVANNAH, GEORGIA
From The Economist print edition

It's hard to bring democracy to a region that has never had it

AFTER the Gulf war of 1991, George Bush senior used his new-found clout to kick-start both the Israeli-Arab peace process and economic reforms across the Middle East. His presidential son expected to bank similar gains after his own Iraq war, with the spread of democracy in that benighted region crowning his military success. But, having stumbled in Iraq, annoyed many of America's allies and enraged the very Middle Easterners who were meant to be uplifted, he seemed to have fumbled the ball in mid-play.

The launch at this week's Sea Island summit of what is now being called a Broader Middle East Initiative is meant to get that ball moving again. The initiative, which includes the creation of high-level, multilateral forums for promoting democratic reforms, the boosting of education, especially for women, and the backing of region-wide micro-finance projects, is ultimately meant to drain the swamp of political disenfranchisement that waters the roots of terrorism.

But summit pageantry and a grand title could not hide the initiative's diminished ambition. This is due to America's dented prestige, tight budget and the difficulty in coaxing reluctant G8 partners on board, and also because western powers need to sustain the very Arab governments they hope to reform, to stave off more immediate dangers.

Western donors, including America, have long used aid to promote “democratisation”, “good governance” and “transparency”. But results have been scant, largely because recipient governments know that their benefactors would prefer stability to the political unrest that might produce, say, a flight of refugees to Europe or—ouch!—costlier oil.

Arab governments will not be too bothered by the latest initiative. Some leaders who attended the Sea Island summit, including those of Bahrain, Algeria, Jordan and Yemen, can puff up reforms already undertaken, and expect reward. Those whose instinct is to resist, such as Presidents Bashar Assad and Hosni Mubarak of Syria and Egypt respectively, or Saudi Arabia's ruling family, can tell their people that they are proudly rejecting America's diktat.

Yet, mild as the initiative's substance is, the simple fact of its being put at the top of the international agenda may create momentum. The region's own beleaguered reformists, who had feared that too strong an American flavour could taint their own efforts, will welcome this week's endorsement by other powers. A particular comfort is the fact that, under concerted European and Arab pressure, the initiative no longer ignores the Arab-Israeli issue, as the first Bush draft had done, but makes tackling it a top priority.

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Israel

Withdrawal? Not quite yet

Jun 10th 2004 | TEL AVIV
From The Economist print edition

When an appearance of progress is as useful as the fact

Reuters

Clinging to a Jewish home in Gaza

Get article background

ITS arm painfully twisted, Ariel Sharon's cabinet declared on June 6th its “intent” to remove the 21 Jewish settlements in the Gaza strip, plus four outlying ones in the northern West Bank, by the end of 2005. The prime minister got his way, but in the process had to bargain away the operational clauses in the plan he first introduced six months ago. The cabinet's text states explicitly that it is not authorising the removal of any settlement, merely a detailed planning process. When the planning is completed, but before any actual evacuation begins, the whole matter has to be brought once again before the cabinet for its approval.

Even to get this far has involved a mighty struggle with the ideologues of Greater Israel, and a remarkable volte-face by Mr Sharon himself; a year ago he would have dismissed the very idea of evacuation as a surrender to Palestinian terrorism—as many of his colleagues do now. A month ago, his own Likud party faithful rejected the plan in a referendum. But the prime minister, proving again his powers of survival, did not acknowledge defeat.

He faced down a powerful group of ministers led by the chief contender to succeed him, the finance minister, Binyamin Netanyahu. He got his way, albeit with damaging qualifications, without breaking up his party. En route, he kicked the far-right National Union out of his four-party coalition, firing its two cabinet members, Benny Elon and Avigdor Lieberman. After the vote, which was passed by 14 to seven, two cabinet members from the National Religious Party resigned but said their party would stay in government.

Mr Sharon and his aides hailed the decision on June 6th as “historic”. They have a point: previous Israeli governments have refused to roll back the settlements until a final peace settlement was delivered. The prime minister dismisses the “intent only” clause as a technicality. Mr Netanyahu's people, on the other hand, see it as postponing the real decision until next year.

Ambiguity has clouded the plan from its inception. Is it a major step towards ending Israel's 37-year-old occupation of the West Bank and Gaza? Or is it a scheme to give away unwanted Gaza in return for a longer and stronger hold over the precious West Bank, with its religious history and its large settlement blocks? The truth is that either interpretation serves Mr Sharon's purpose pretty well.

The Israeli government's interest is to engage in a political process, or at least the semblance of one. Doing nothing, leaving all negotiation frozen, risks subjecting Israel to intolerable external pressure, above all from the United States. But actual withdrawal could lead to domestic upheaval. Remember, after all, the assassination of Yitzhak Rabin by a right-wing extremist in 1995, and the recurring fall of governments ever since. The best and safest strategy for an Israeli government is to give the appearance, but just the appearance, of progressing towards Palestinian independence. Indeed, it can be argued that this strategy has been adopted by every Israeli government since the Madrid peace conference in 1991.

All the same, will Mr Sharon's Gaza plan materialise? Shimon Peres, Israel's elder statesman, opposition leader and Mr Sharon's old friend and, sometimes, political partner, says that the difference between “a

statesman and a Messiah is the timetable". The plan as its stands deliberately avoids a timeline. Mr Sharon told the cabinet that planning should end no later than March 1st next year; his aides hinted at a closer deadline for the vote on evacuation. The National Security Council, a government advisory body, reckons on the forcible evacuation of settlers starting in September next year.

With the cracking of his right-wing coalition, Mr Sharon's survival hinges on support from Mr Peres's Labour Party. The prime minister would love to see his old pal joining him and the centrist Shinui party to form an "elderly disengagement coalition" (Mr Sharon is 76, Mr Peres 80 and Tommy Lapid, Shinui's leader, 72).

But here's the catch: to come aboard, Labour is demanding a more definite withdrawal plan, while the Likud parliamentary faction, whose consent is needed to bring Labour in, would try to dilute it even further.

Once again, Israel is entering a period of political turmoil. Mr Sharon will find it ever harder to govern. The most likely outcome is an early election next year (the scheduled date is 2006 or 2007). But as has been proven time and again, it would be rash to write the old man off. Moreover, the Gaza withdrawal plan is now a political fact, and will serve as the starting point for any future political contest.

Then there is the Palestinian factor, largely ignored throughout the Israeli debate. The watered-down version of the plan has been bitterly criticised by the Palestinians living under occupation and by other Arabs. The *intifada* is not over. A resumption of suicide bombings in Israel could blow up the whole endeavour—whatever the outcome of Mr Sharon's battles on the home front.

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Congo

The battle lines are redrawn, again

Jun 10th 2004 | BUKAVU
From The Economist print edition

Though the rebels have withdrawn, they haven't given up on war

AFP

My helmet is a bit harder than yours

Get article background

THE Congolese rebels made no apology for their murder, rape and pillage. But, as they withdrew this week from Bukavu, eastern Congo's biggest town, they did concede that their week-long occupation of it had been a “mistake”. Their leader, Brigadier-General Laurent Nkunda, said he had been “mis-led” into thinking that the national army had been massacring Congolese members of his own Tutsi ethnic group in Bukavu. With that, General Nkunda's columns of Tutsi fighters plodded back into the green hills outside the town, carrying suitcases on their heads and driving herds of cattle before them.

If only the damage wrought by General Nkunda's stunt could be so easily undone. One hundred people were killed, including many civilians, as the rebels fought their way into the town. Shops and houses were looted and women raped. Ethnic tensions are now boiling. Fearing reprisal, thousands of Congolese Tutsis have fled across the nearby border into Tutsi-run Rwanda. But even these sorrows will be quickly forgotten if, as some fear, General Nkunda's raid on Bukavu turns out to have re-ignited Congo's vile civil war.

Its latest phase began in 1998, when Rwanda engineered a rebellion in eastern Congo, then invaded. Seven more African armies joined the fray, on one side or another, spawning yet more rebel groups. Some 3m people died, before the last foreign armies left last year. President Joseph Kabila then concocted a national-unity government with sundry rebel leaders. But in eastern Congo several rebel commanders disobey orders from Kinshasa, Congo's capital, and still look to their former sponsors in Kigali, Rwanda's capital. General Nkunda, for example, who spent several years in the Rwandan army, admits he is in contact with his old comrades, if “only by telephone”.

Rwanda is widely loathed in eastern Congo, which it occupied brutally. As a result, the area is always awash with wild stories of its latest meddling. Yet it is a bit hard to explain General Nkunda's attack on Bukavu unless it was ordered by his former master. The action has drawn hatred on his tribe, widened his rift with Kinshasa, and seemingly won him nothing.

Across eastern Congo, old battle-lines are now being drawn again. As the government's defeated troops marched back into Bukavu in the rebels' wake, they were attacked by another pro-Rwanda militia. Units of Mr Kabila's elite presidential guard, with smart black uniforms and gleaming rocket-launchers, have

been spotted arriving at airstrips in eastern Congo. Seizing their chance amid the chaos, a fugitive Rwandan Hutu militia, which fled into Congo after perpetrating the 1994 genocide, kidnapped at least 60 villagers near the eastern Congolese town of Uvira.

Who will stop Congo disintegrating again? Belgium's foreign minister, Louis Michel, has suggested that a European Union force be deployed in Bukavu, following the success of a French-led intervention in the bloody province of Ituri, in north-eastern Congo, last year. But European diplomats say it is unlikely such a force could be raised. That leaves the UN's peacekeeping mission in Congo, which could barely defend its own staff during the recent mayhem. Blaming the blue helmets for Bukavu's fall, mobs attacked the mission's compounds in three towns. In Kinshasa, UN guards shot five protesters dead. In Goma, two South African peacekeepers were killed after their convoy came under fire.

There is confusion over what the peacekeepers are authorised to do to stop further fighting. One senior UN man argued that the UN's mandate in Congo only allows “the use of force to protect civilians, not to protect the peace process”. But if Congo slid back into war, its civilians would certainly suffer most.

Some brave peacekeepers are finding ways around such bureaucracy. During the battle for Bukavu, one South African captain came across a rebel blazing away with a machinegun at no apparent target. “I asked him what the hell he was firing at, and to stop,” the captain said. “He refused. So I said if you don't stop I'll kill you. *Ja*, then he stopped.” But such confrontations were rare. After one aid worker was raped and another wounded, the peacekeepers instead concentrated on evacuating wounded and threatened civilians and a Canadian punk band, SUM41, which had come to film a music video.

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Somalia

The dodgiest passports in the world

Jun 10th 2004 | MOGADISHU AND NAIROBI
From The Economist print edition

How people with no government get their travel documents

Get article background

NO SOUVENIR-HUNTER'S trip to the Somali capital, Mogadishu, is complete without a visit to the Big Beard shop. Tucked down a dingy alley in the Bakara Market, not far from the weapons stalls, the Big Beard develops photographs while you wait, and can rustle up a “genuine” Somali passport for just $30.

At least, Mr Farah, the proprietor, claims they are genuine. He has a proper laminating machine, and he rescued an official seal from the rubble of the foreign ministry, which was destroyed 12 years ago. Clients are offered a variety of backdrops for their passport snaps. Your correspondent went for the jungle green one, awarded himself a generalship and was pleasantly surprised to discover that he had been born in Mogadishu.

Mr Farah's clients are mainly Somalis who have scraped together enough cash to try to escape their lawless homeland. But a number of terrorists and dodgy businessmen are also taking advantage, to the alarm of neighbouring Kenya; in April, President Mwai Kibaki's government announced that Somali passports would no longer be recognised.

Peeved, some Somali warlords retaliated by banning Kenyan passport-holders from the bits of Somalia they control. This, however, would only affect Kenyans who both wish to visit Somalia and have actually managed to obtain a passport from the Kenyan authorities, which, even with the right contacts, can take a year and cost $1,000.

Somalis, meanwhile, are finding ways around Kenya's non-recognition of their travel documents. On a dusty airstrip outside Mogadishu, 22 of them piled into a tiny cargo plane after paying $300 to the pilot, who, strictly speaking, wasn't supposed to be carrying any passengers at all. With another $100 tucked into their new passports for the friendly immigration officials in Nairobi, they happily perched wherever they could. Your correspondent's lap was as good a place as any for one elderly gentleman. As the plane swayed and groaned on its ascent, the Kenyan pilot turned on a cassette player. “I'm leaving on a jet plane/don't know when I'll be back again,” John Denver crooned into the sweat-drenched cabin.

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The European Union summit

Try, try, try again

Jun 10th 2004 | BRUSSELS
From The Economist print edition

The fate of the European Union's constitution will be decided at an EU summit in Brussels next week

LAST December, they tried and failed. At the end of next week the 25 leaders of the European Union will once again seek to finalise a new constitutional treaty. All agree that a second failure would be damaging for the EU—and might be fatal for the constitution. But success is by no means assured. Bertie Ahern, the Irish prime minister who will chair the summit, puts the chances of a deal at no more than 50-50. An Irish diplomat close to the negotiations complains that, with a week to go, "literally every one of the 25 countries still has issues they want resolved."

This may be frustrating, but it is hardly surprising. The arguments often sound both technical and obscure, but they mostly boil down to something simple: power. How should power be distributed among EU member countries? And which level of government—the EU or the nation-state—should have power in a particular policy area? The deal-breaker last December was the proposed new voting system. At present, votes are weighted to give smaller countries a disproportionate say. The new constitution proposes to move to a system of "double majority", under which a proposal would pass if it commanded the support of 50% of countries, representing 60% of the EU's population. Poland and Spain, which stand to lose influence, blocked this last December. Both have now accepted double majority in principle, but are haggling over the detailed formula. The likely outcome is a baffling compromise: it might be 55% of the member countries, representing 65% of the population, with an appeal for countries that are narrowly out-voted. Thus one virtue of the double majority, which is that it is easier to understand than the present system, may be lost.

The other big institutional argument concerns the European Commission. The draft constitution proposes to abandon the principle that every country should have a commissioner. But this is unacceptable to smaller countries that see the commission as guardian of their interests. Once again, the likely outcome will be a compromise; every country will keep a commissioner until 2014, at which point the commission will shrink to 18 members.

Previous EU summits have sometimes turned into Britain versus the rest. This one could easily do so too, because Tony Blair has an unusually high number of "red lines", his phrase for issues that he insists are non-negotiable. Most of them come down to a rejection of majority voting in particular policy areas. The

British insist that national vetoes must be maintained over tax, foreign policy, social security and how the EU raises revenues (this is a concern because majority voting might threaten Britain's budget rebate). Britain also wants to circumscribe majority voting in criminal law; has misgivings about creating a European public prosecutor; and wants more legal language to ensure that the Charter of Fundamental Rights, which makes up part two of the treaty, will not affect British domestic law. Mr Blair will probably defend his red lines on tax, foreign policy, the budget and social security. But he may have to compromise on the public prosecutor and the charter.

The British may have an unusual number of red lines, but they are not the only ones to be laying out a tough negotiating position. The Dutch, who are the biggest payers per head into the EU budget, say they will veto any effort to move decisions on EU finances to majority vote. They will also struggle, probably in vain, to make the much-abused ceilings on euro members' fiscal deficits more enforceable. There remains also a camp of countries pressing for the inclusion of a mention of God or Christianity in the preamble to the constitution, but they are likely to fail in the face of stiff French and Belgian opposition.

The constitution will not be the only subject on the agenda. EU leaders are due also to nominate a new president of the European Commission for the next five years. At any normal summit, this would be a dominant subject, particularly since the field is still wide open. But the Irish say they will try to settle the commission presidency quickly. Awkwardly, though, the two front-runners—Guy Verhofstadt, the prime minister of Belgium, and Jean-Claude Juncker, the prime minister of Luxembourg—will both be sitting at the table.

In theory, the question of who becomes president of the commission and what happens to the constitution are entirely separate. But, given the EU's predilection for package deals, it is quite possible that the two issues will become linked, at least tacitly. Another possibility is that the choice of the commission president could be deferred. But that could happen only if agreement on the constitution were secured. A double failure would be too much of an embarrassment.

Or would it? All sides are going into the summit swearing that they are determined to reach agreement, and yet some governments might be quietly thankful for a failure. Marek Belka, the new Polish prime minister, is in a deeply insecure political position in Warsaw. His colleagues worry that he may not have the political leeway to compromise. A failure that could be laid at somebody else's door would also suit Mr Blair, who has been manoeuvred into promising a referendum on the European constitution that looks hard to win. Even Jacques Chirac of France, who speaks publicly of the urgent necessity for a deal, might privately prefer a failure.

Only a few years ago in Nice Mr Chirac fought tooth-and-nail to stop Germany securing more voting power than France; yet just such a change is central to the constitution. Mr Chirac has not enjoyed the arrival of new central and eastern European countries, and is under pressure over the possible opening of negotiations with Turkey. A summit failure that discredited both EU expansion and Britain, provoking a new drive for a European hard core based around France and Germany, might suit him nicely. Yet even if, in private, some leaders might prefer a failure next week, it is probably too late for that. They may just be doomed to agree.

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Franco-American relations

After D-Day

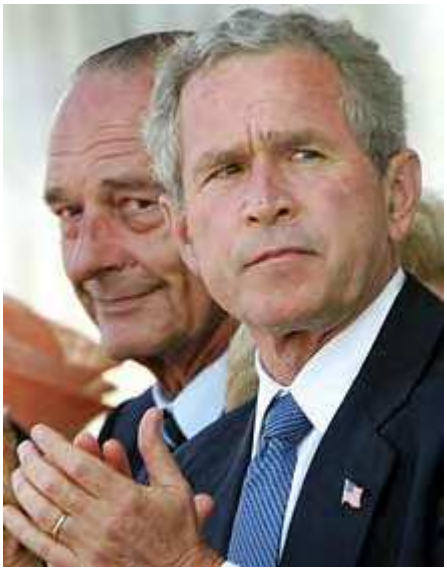
Jun 10th 2004 | PARIS
From The Economist print edition

Differences between two old allies continue to run deep

THE choreography in Normandy was French, but the screenplay was pure Hollywood. France “will never forget its debt to America, its everlasting friend,” said President Jacques Chirac. “France was America's first friend in the world,” replied President George Bush. No one mentioned Iraq. Two villains of last year's fall-out—Dominique de Villepin, former French foreign minister, and Donald Rumsfeld, American defence secretary—were absent. But beyond the D-Day celebrations and this week's agreement to a UN Security Council resolution on Iraq, is there a thaw in Franco-American relations?

Mr Bush's visit certainly warmed things up. The French saw the D-Day ceremonies partly as a counter to an American belief that France had forgotten. There was a spontaneous outpouring of thanks on the streets; anti-Bush protests were limited. Despite tense moments in their press conference, the two leaders' meetings were cordial. And securing France's backing for the UN resolution on Iraq is strategically valuable for Mr Bush. The French can even claim that, this time, the Americans listened to them. This effort to defrost the relationship will import goodwill to the string of summit meetings this month.

Reuters



Allies—or adversaries?

Scratch beneath the surface, however, and differences remain. Seen from Paris, the idea that America is vilifying France for not helping in Iraq is baffling. The Americans got themselves into this mess, against French advice: they must dig themselves out. Indeed, that the Americans might feel bitter about the French is a dishonest inversion: any bitterness is owed to the Americans for creating the problem. Distrust of America runs deep. During the war, a quarter of French people (and 30% of those aged under 35) told pollsters they wanted Saddam Hussein to win. Over half identified America as a threat to world peace. A year on, 93% of French people consider that France was right not to back the war; and 84% do not want Mr Bush re-elected. Some 12% of the French and 24% of Americans—more than in 2002—consider the other an adversary, not an ally.

The demonising of Mr Bush has intensified. A front cover of *L'Express* in December had him as “The man who ruined our year”. After Abu Ghraib, Bush aversion turned to nausea. The scandal, said *Le Monde*, is “today's heavy price for the imperial arrogance of the Bush team and its refusal to admit that the rest of the world does not function *à l'Américaine*.” Sentiment among officials is scarcely more polite. One talks of the “autism” of the Bush administration on the Middle East. François Heisbourg, director of the Foundation for Strategic Research, which is close to the defence ministry, says that “Bush has spoiled a 60-year-old strategic relationship.” Seminars now ask not “How deep is the transatlantic rift?”, but “Is the transatlantic alliance still necessary?”

Some bilateral channels work, such as those on counter-terrorism and non-proliferation. But they take place against a backdrop of distrust. The Americans think the French are soft on terrorism. The French think the Americans have lost their bearings in their anti-terrorism crusade, and that policy is dictated by vengeance-seeking and ideological fanaticism. Relations between the two armies are poor.

Even where bilateral co-operation exists, it masks big differences. Mr Chirac is eager to build Europe as a “counter-balance” to American power. Michel Barnier, his new foreign minister, told a recent seminar that “our American friends must understand that we are going to build Europe, not only as a market but as a

power.” The French see “multipolarity” as uncontroversial; to the Americans, it smacks of strategic rivalry. This desire to assert European independence reaches back to and beyond de Gaulle, and is felt across the political spectrum. It was Hubert Védrine, a former Socialist foreign minister, who first railed against the American “hyperpower”.

Today, France's quest to preserve its global voice is coupled to a belief that, on issues such as Israel-Palestine, or the role of NATO in Iraq, America and France are miles apart. Hence the view that the best policy towards America is to sit tight and avoid aggravating matters, without offering more help than necessary—and hope meanwhile that John Kerry is elected in November. But this yearning carries its own risks, not least of disappointment.

The tone of transatlantic relations under a Kerry administration might improve. But hopes of a fresh start rest on a nostalgia for the Francophile America of the 1960s, and a delusion that denies the reality of America's post-September 11th mood. Anyway, Mr Kerry supported the war in Iraq. His reading of the Middle East might not differ from Mr Bush's. Just as France's divergence with America did not start with Mr Bush's election, so America's differences with France might well not end with the election of Mr Kerry.

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German politics

Children of the bourgeoisie, unite!

Jun 10th 2004 | BERLIN
From The Economist print edition

Could the Greens become the kingmakers of Germany?

SOME things rarely change, notably German politics. Before every European election, pundits lament that the campaign is about domestic politics and that Germans are losing interest in Europe. But in this weekend's elections, two other political classics are more interesting. One is whether the Free Democrats (FDP) will stop their decline, and clear the 5% hurdle a party needs to win any seats. The other is whether, for the first time, there might be a coalition of Christian Democrats (CDU) and Greens in one of Germany's states. For the CDU is expected to lose its absolute majority in the state election in Thuringia.

The two questions are really one: who in future will tip the scales in Germany's political system, in which absolute majorities are rare thanks to proportional representation? Until 1998, the FDP was the kingmaker. But it was the Greens that helped Gerhard Schröder to become chancellor and have now established themselves as the third force in German politics. In the European elections, they will probably double their score to 11-13%.

Zoom back 20 years and such a scenario looks surreal. The FDP was then Germany's most modern party, demanding far-reaching structural reforms while also defending civil liberties. The Greens had only just won their first seats in the German parliament, and were widely considered a transitory phenomenon whose radical anti-establishment views would soon return them to political obscurity.

That did not happen. With everybody now calling for structural reform, the FDP no longer has a unique selling-point. It also seems now to be less free-market, certainly when it comes to the party's core supporters, such as architects and lawyers. But the FDP's biggest flaw is that it has moved down-market. To broaden its appeal at the 2002 elections, Guido Westerwelle, the FDP leader, tried to reposition the party as a *Spasspartei*—a fun-loving party for which serious things like civil liberties no longer mattered. According to a recent poll, 59% of Germans associate the FDP with the word “show” and only 45% with “freedom”.

Even as the FDP squandered political capital, the Greens nurtured theirs. Their ministers are among the more competent and popular in Mr Schröder's cabinet. What is more, the party has ditched many leftist positions. It supported sending German soldiers to Kosovo and Afghanistan. Today, younger Greens are not just environmentalist and socially liberal, but also fiscal conservatives. This metamorphosis has made the party more appealing to younger and less culturally conservative Christian Democrats. At local level, there are many so-called “black-green” coalitions: for instance, in Cologne, Kiel and Kassel. In such coalitions the “children of the bourgeoisie” find and embrace one another, jokes Paul Nolte, an historian.

There remain many issues on which Greens and Christian Democrats disagree, such as nuclear power, immigration and same-sex marriages. This is why not many black-green coalitions are likely. Indeed, in Thuringia, CDU leaders have so far excluded any possibility of such a coalition. But after elections these denials can be quickly forgotten. And even if such a pairing does not happen this time, the next chance may come soon: in May 2005, in an election in North Rhine-Westphalia.

Whether the Greens can become the hinge of German democracy will, of course, depend also on the FDP. At a party congress on June 6th, FDP leaders vowed to focus on policy debates not personal battles. Yet the next one already looms: whether Mr Westerwelle or Wolfgang Gerhard, the FDP parliamentary leader, should be foreign minister if Mr Schröder loses the 2006 elections. Such personal feuds will not help to fend off Green pretensions to be the new kingmakers.

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Italian education diplomas

The best that money can buy

Jun 10th 2004 | ROME
From The Economist print edition

Examinations for sale

A JUDGE in Camerino sits watching a video that could be hard-core porn, except that the “stars” are an elderly professor and a young student. In Messina, another professor jumps to his death from the balcony of his flat. Pupils arriving at a school in Crema, near Milan, are greeted not by their teachers, but by police officers, who escort them to a classroom for questioning.

These bizarre events all point to a rottenness in Italy's education system. A rash of scandals has shown that qualifications, including degrees, are for sale. The two professors were accused of offering higher grades for sex. One chose suicide. The other fought, claiming that it was charm, not high marks, that had seduced his students. On June 7th, he was acquitted; but he must pay compensation of €120,000 ($150,000) to his university for damaging its reputation.

The school in Crema was among 34 private secondary schools caught up in an investigation into a vast trade in bogus exam passes. The going rate for a *diploma di maturita*, Italy's school-leaving certificate, was said by prosecutors to range from €2,000 to €8,000. Since a diploma is needed to apply to university or get a white-collar public-sector job, that seemed a bargain—the more so since the organisation behind it, called Diploma No Problem, offered such good service. Answers were supplied in advance for written and oral exams; attendance records were fixed. Conversations taped by the police suggest that the company even booked flights and hotels for “clients” so they could sit exams in places where the outcome was assured.

One school south of Rome seems to have existed almost solely to produce study-free passes. It had 40 normal pupils, but around 1,000 external ones. The school was owned by a man with a criminal record, identified in court records as one of the bosses of Diploma No Problem. Some 23 people have been arrested in co-ordinated raids around the country, and 400 others are still under investigation. Police reckon the enterprise had an annual turnover of €5m.

Its activities were made possible by a reform, introduced by the previous centre-left government, extending to private schools the right to hold examinations that had previously been confined to the state. In the universities, results have long been easy to fiddle, because of a reliance on oral exams. Last year, police in Rome discovered a ring based in the law faculty at Sapienza University that was said to be offering exam passes for €1,000-3,500. Italy's education minister, Letizia Moratti, has asked a panel of officials to investigate the entire phenomenon. About time.

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Russian security trials

In your court

Jun 10th 2004 | MOSCOW
From The Economist print edition

A Supreme Court decision raises concerns about security trials in Russia

IS IT spying if what you tell foreigners is common knowledge? Valentin Danilov, a physicist in Krasnoyarsk, Siberia, passed information about the effects of solar activity on satellites to a Chinese firm for which he was doing contract work. At his trial for espionage, several scientists signed a statement swearing that the material he supplied had not been secret since 1992. At the end of last year, a jury duly acquitted him. But this week Russia's Supreme Court overturned the verdict on a technicality, sending the case back for retrial. Whether the court was yielding to pressure or, as it says, upholding prosecutors complaints about procedural violations, is unknown. But Valentin Gefter, director of the Human Rights Institute in Moscow, says that "the likeliest result is not a happy one [for Mr Danilov], because they'll now go back to Krasnoyarsk and try to pressure the jury harder."

Mr Danilov's was the first espionage case to be tried under Russia's relatively new jury system. In judge-only trials the conviction rate is over 99%; in jury cases it has been 80-85%. Shortly before Mr Danilov was declared not guilty, another scientist, Igor Sutyagin, began a jury trial on charges of treason; his defence was that the material he supplied to a British firm was based on press clippings.

Mr Danilov's acquittal raised hopes that Mr Sutyagin would get a fair hearing. But it also made the FSB, Russia's security agency, realise that juries are harder to sway than judges. In February, a bill was presented to parliament to make espionage and treason cases ineligible for jury trial. Mr Sutyagin's original judge and jury were replaced and, in April, after a trial that his lawyers said was full of irregularities, he was convicted and sentenced to 15 years in jail. The judge, in her instructions to the jury, skirted questions on whether his material had been secret and told them just to make up their minds whether he had passed information to foreign contacts—which he did not deny.

One problem is the incompetence of prosecutors. Mr Sutyagin's case first went before a judge in 2000, who ruled that the FSB's case was too badly formulated to stand trial, but allowed the agency another go. Judges in other cases, trapped between commitment to the law and fear of the security services, have done the same. After one case in the late 1990s, the Supreme Court restricted judges' ability to send cases back and ordered the abolition of the notorious "Decree 55" defining state secrets, whose content was itself secret.

But another problem is that the law remains vague. Even after Decree 55 was abolished, says a report by the parliamentary assembly of the Council of Europe, it was invoked in the trial of a journalist, Grigory Pasko. And unluckily for Mr Sutyagin, "treason" could in theory be defined as providing any information that a foreign power used against Russia, even if it were not secret. What is worse, court judgments in Russia do not set binding precedents.

Still, the Supreme Court carries weight. Mr Sutyagin is appealing against his conviction on procedural grounds. If he wins, says Mr Gefter, that could be a warning to the Krasnoyarsk court to play fair with Mr Danilov when he comes before it again.

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Turkey's Kurds

Freedom calls

Jun 10th 2004 | ANKARA
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Good news for a beleaguered people

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Reuters

A sunny day for Zana

BY ANY standards June 9th was a splendid day for Turkey's 12m-odd Kurds. State-run Turkish television aired its first-ever broadcast in the most widely spoken Kurdish dialect, Kurmandji. And hours later a Turkish appeal court ordered the release of the country's most prominent female Kurdish politician, Leyla Zana, and three colleagues, who had spent ten years in jail after being convicted in 1994 on charges of belonging to the Kurdish separatist rebel group, the PKK. All four promptly walked free, pending an appeal that will be heard on July 8th.

Thousands of Kurds, waving the once-banned Kurdish red, green and yellow flag, took to the streets to celebrate. For decades the state had denied the Kurds' existence, as well as that of their ancient tongue. An emotional Mrs Zana, whose “crimes” included addressing the Turkish parliament in 1991 in Kurdish (never mind that she was calling for peace between Turks and Kurds), declared that her struggle was not over, but that “sunny days” awaited the country if everybody worked together for “peace, justice and democracy”.

Both moves were intended in part to help chivvy European Union leaders into giving Turkey a date for the start of membership talks at their summit in December. Mrs Zana's case was seen as a test for the strength of Turkish democracy and justice. The noises coming from Brussels are increasingly favourable. Günter Verheugen, the European commissioner for enlargement, said that the court's decision was proof that Turkey's EU-oriented reforms were “gaining ground”.

Much credit is due to Turkey's prime minister, Recep Tayyip Erdogan, and his Justice and Development party, which came to power 19 months ago. The party, established by former Islamists, has used its parliamentary majority to push through a raft of sweeping reforms. Mr Erdogan also strong-armed his Turkish-Cypriot protégés into backing the latest UN plan to reunite Cyprus, though it was then rejected by the Greek-Cypriot side in a referendum in April. But credit is also due to Turkey's hawkish generals, if only because for once they have not sought to block change. This is not to say that Turkey's dreadful human-rights record is now squeaky clean. This week alone, police in Istanbul detained 25 Kurdish journalists accused of links with the PKK.

Durable peace between Turks and Kurds can be assured only if the government lends an ear to the PKK's renewed calls for a full amnesty for all 5,000 or so of its fighters, as well as for its remaining leaders, who are hiding in mountain bases in Kurdish-controlled northern Iraq. Earlier this month the rebels threatened to resume their war because of the government's failure to heed their demands, which include freeing their top leader, Abdullah Ocalan, who has been in jail since his capture in 1999.

Yet it seems unlikely that most Kurds, even though they have long seen the PKK as freedom-fighters not terrorists, are ready to be dragged into a new war. Turkey is putting pressure on the American forces in Iraq to root out and disarm the PKK. Caving in to Turkish demands, the EU has added the PKK to its own list of terrorist organisations. The risk is that terrorism is just what increasingly beset guerrillas may resort to, unless Turkey finds a formula to forgive their past misdeeds.

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Charlemagne

Barbarians at the gate

Jun 10th 2004
From The Economist print edition

Contrary to expectations, this week's elections could be the making of the European Parliament

NIGEL GARDNER, a British candidate in this week's elections to the European Parliament, was recently confronted with an unusually direct expression of the difficulty facing the institution he aspires to join. Mr Gardner was out campaigning for the Labour Party in Hemel Hempstead, a medium-sized English town, and approached a female shopper with the usual candidates' patter—"Madam, may I take a few moments of your time to talk about the European elections." The woman looked at him with distaste and incredulity, then moved her face to within a couple of centimetres of Mr Gardner's before yelling at the top of her voice: "Boring".

That, in a nutshell, is the big problem facing the European Parliament. Voting will take place over four days between June 10th and 13th, in all 25 European Union member countries. In most normal elections attention would focus on winners and losers, but in these ones the figure that matters will be the turnout. In the first direct elections to the European Parliament in 1979, 63% of the electorate voted. By 1994 this had fallen to 56.8%. At the most recent elections, in 1999, participation was down to 49.4%.

The sense that ordinary Europeans are disengaging from the parliament is debilitating for an institution that already stands accused of corruption and irrelevance. And it is a worry not just for the parliament, but for the EU as a whole. Even Europhiles acknowledge that the Union has an image problem, with most ordinary Europeans seeing it as remote, incomprehensible and run by unaccountable bureaucrats. The parliament is supposed to be the main answer to this so-called "democratic deficit". Successive treaties have given it ever more power over European legislation, which in turn accounts for about 50% of all new laws in EU member countries. Yet, as a senior official at the parliament puts it, "we face this incredible paradox: the more power the parliament gets, the less people vote."

Not everybody is convinced that this is a real problem. Daniel Cohn-Bendit, the leader of the Greens in the parliament, points out that turnout in American presidential elections has usually hovered around the 50% mark, but "nobody says that the United States is not a democracy." It is a good answer, but not a complete one. The European Parliament, unlike the American presidency, is a young institution struggling to establish its legitimacy. And in European terms, its ability to inspire people to vote is pretty feeble. Professor Richard Rose of International IDEA, a think-tank, has monitored what he calls the "Euro-gap", which measures the different turnout in national and European elections. This shows, for example, that only 40% of Portuguese voted in the European elections of 1999, whereas 61% voted in elections to the

national parliament at around the same time. The biggest Euro-gap was in the Netherlands, where 80% voted in last year's national elections and just 30% in the 1999 European elections. Across the European Union, according to Professor Rose, the Euro-gap was around 22 percentage points.

And now the good news

Another expected outcome of the elections is a surge in votes for populist parties opposed to the European Union. In Poland, Samoobrona (Selfdefence), a party led by Andrzej Lepper, a pugilistic peasant who rants against the EU, is likely to win a big block of seats. In Britain, the UK Independence Party, which advocates withdrawal from the EU, could win as much as 15% of the vote. Other Eurosceptic parties expected to do well include the Civic Democrats in the Czech Republic, Denmark's June Movement and Sweden's JuneList.

The rise of Eurosceptic and populist parties may be bad news for the EU, because of the disillusion with the whole project that it reflects. But for the European Parliament as an institution, it could actually be quite positive. For it would place the parliament in a unique—and so potentially powerful—position within the EU. One of the oddities of the club is the extent to which most of its leading institutions have managed to insulate themselves from public opinion. National ministers and diplomats haggling in the Council of Ministers often seem to regard their job as “delivering” their publics, as much as representing them. The European Commission, which is unelected, unabashedly sees itself as the keeper of the European flame. And the European Parliament has traditionally been the most federalist of all the EU institutions. The three biggest political groupings—the centre-right European People's Party (EPP), the Socialists and the Liberals—have long been dominated by true believers in “ever closer union”.

This situation will not be transformed by this week's elections, but it could change significantly. Already the EPP, which is likely to remain the parliament's biggest political group, has rewritten its statutes so as to accommodate the British Tories, who explicitly reject the group's traditional federalism. The two avowedly Eurosceptic political groups—one broadly on the left, one on the right—are both likely to gain members. There could be a new alliance of far-right parties that might include France's National Front. Nobody knows which group the Polish potato-throwers will join. But parties that are broadly Eurosceptic could see their representation rise from around 10% in today's parliament to as much as 20%.

Many centrists will doubtless react with horror to this. But the arrival of anti-European populists, along with a sprinkling of cranks, celebrities and single-issue fanatics, among the 732 MEPs reporting for duty after the election might at long last excite some public interest in the parliament. Debate may become less genteel and the work of all those worthy committees on fish quotas and chemical regulations could be disrupted. But by making the parliament more reflective of the true breadth of European opinion, in all its diversity, this week's elections could yet raise its standing in Europe.

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Sexual discrimination

Sexism and the City

Jun 10th 2004
From The Economist print edition

High-profile cases are a sign not of more discrimination against women but of less

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STEPHANIE VILLALBA, a former senior executive with Merrill Lynch, had an excellent track record during her first 16 years with the company. In May 2002 she became head of its European private-client business with the rank of first vice-president. But things began to go wrong, she claims, when five months later she was given a new line manager, Ausaf Abbas. Not only did he try to take over her territory, but he also “bullied, belittled and undermined” her, she says. Once, in an executive jet on the way to a business meeting, she was instructed to sit in the stewardess's seat and serve drinks to Mr Abbas and other male colleagues.

After earning $700,000 in salary and bonuses in 2001, Mrs Villalba received a little less than $550,000 in 2002—despite her promotion. Her four peers, running similar private-client operations in other regions, were paid between a third and a half more, she says. In February last year, she was told she was being moved from her European job and was offered another post which she rejected as a “clear demotion”. As no suitable alternative post could be found, she was sent away on a three-month sabbatical before being dismissed in July. Now she is suing the investment bank for £7.5m ($13.8m).

Merrill Lynch insists that Mrs Villalba's dismissal was due to her poor performance and had nothing to do with her gender. She had been promoted “out of her depth”, it says, and was clearly failing in her job. The record $47m pre-tax loss clocked up in her region in 2002 in the aftermath of the September 11th attacks was “far worse” than in other regions. She had been replaced in her European role by another woman. One of the five other regional executives was also a woman. The case is expected to continue for six weeks.

Merrill Lynch has become uncomfortably familiar with such cases. In April this year, an American arbitration panel awarded Hydie Sumner, a former Merrill broker, $2.2m after finding that the investment bank had systematically discriminated against women. Merrill Lynch has already paid out more than $100m in compensation to hundreds of other past and present female employees.

America is the land of the sex-discrimination lawsuit: the world's biggest award, of $10.6m, was made by an American jury in 2002 to a former employee of Hoffman LaRoche. In England, such cases are heard by employment tribunals, consisting usually of a three-man panel—one management representative, one union representative and a lawyer—which sits without a jury. Awards therefore tend to be much smaller. The biggest sex-bias award to date in Britain was £1.4m won by Julie Bower, a senior analyst with Schroder Securities, a City investment firm, in a case brought by the Equal Opportunities Commission three years ago. No other major European country has yet made a sex-discrimination award anything like as high.

But Britain may be catching America up. That's partly because of changes in the law. While sexual-discrimination legislation has been in place since the 1970s, recent changes have made it easier for women to bring, and win, cases. In a landmark ruling last year, the judge in an appeal by Louise Barton, a media analyst with Investec, another City investment firm, clarified for the first time new burden-of-proof regulations, introduced in 2001. While the plaintiff still had to prove the facts from which sex-discrimination could be inferred, the judge said, it was up to the employer to prove that discrimination had not in fact taken place. Since last year, employers in sex discrimination cases have also been obliged to reply to questionnaires, submitted by the plaintiff, on their pay and promotion practices.

Changes in the City are also encouraging such cases. There's no doubt, according to people who work

there, that the place discriminates heavily against women. Opaque pay structures, involving vast bonuses, make that easier. According to the former business manager of one of the big investment banks, women's salaries tend to be 25% lower than those of men doing the same job; the differential in bonuses is larger still.

But the number of women making big bucks is growing fast. A senior banker reckons that, ten years ago, 5% of employees earning serious money were female: now 20% are. A survey by the *Financial Times* earlier this year found that a fifth of City fund managers were women.

Many take the view of one woman who has just quit a senior job: “I knew I was less well-paid than the men. But I was so astronomically well-paid I didn't much mind.” Some have a different attitude, particularly when they have been fired. And as more women reach higher managerial positions and earn more, so their claims have risen. Loss of past and expected future earnings is a key factor in estimating compensation awards, along with length of service, seniority and pension rights.

Such cases are changing the way the business works; and the Americans, more sharply aware of the dangers of expensive litigation than British companies, are leading the charge. All the big American-owned investment banks now have diversity programmes. Senior managers have to undergo rigorous equal-opportunities training to ensure that they avoid seeming to discriminate against anybody on grounds of gender, colour or sexuality. Recently several investment banks took part in the City's first-ever lesbian, gay, bisexual and transgender careers event.

What effect does all this have? It annoys a lot of people. “There's a huge amount of humbug, especially in the American investment banks,” says a former managing director of one. It may help some women get and keep good jobs, admits a senior manager of an investment bank. “There's an element of positive discrimination in appointments, and most of the investment banks would be significantly shyer of firing a woman than a man.” Whether this does women much good is questionable. “If you're a woman and you become a managing director, two-thirds of the men will say behind their hands that it's only because you're a woman,” says the former managing director.

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Football hooligans

England expects

Jun 10th 2004
From The Economist print edition

Two cures for the English disease will be tested this month

Get article background

IF DECISIONS about where to play international football tournaments were made solely with English hooligans in mind, matches would always be far away from the homeland, in unfamiliar countries where the weather is dismal and the beer expensive. Not, in short, somewhere like Portugal, where the European championship kicks off this week.

England's “barmy army” has not mobilised since 2000, when its foot-soldiers altered the seating arrangements in a couple of Belgian town squares. In the meantime, CCTV and shrewd policing have put the lid firmly on domestic hooliganism, which now produces just under five arrests per Premiership game—about the same as in Germany. But the English are still unusually dangerous when abroad. Otto Adang, research manager at the Dutch police academy, says that unlike fans from elsewhere, they are willing to put aside local rivalries if there are foreigners to be duffed up.

Why the English addiction to off-pitch entanglements? It's such a big problem, and has been around for so long, that it constitutes an academic topic of its own. Scholars of hooliganism cannot agree, though. The traditional notion, advanced by sociologists at the University of Leicester, is that hooligans comprise a subculture of “rough” working-class men immune to the civilising process. Nobody likes them, and they don't care.

A newer idea is that hooligans are basically ordinary folk in the grip of an identity crisis. Clifford Stott, a Liverpool University psychologist who has been working closely with the Portuguese police, believes that fans rebel because an external force (usually riot cops) affronts their sense of English manhood. That produces a change in “category membership” and turns a rabble of shirtless, drunken singers into a highly motivated fighting force.

Both schools of thought are influential, and both have contributed to the policing of Euro 2004. The idea that hooligans are a distinct and incorrigible group will lead to about 2,700 fans being kept in Britain. Some have convictions for football-related disorder, while in other cases, the police have convinced magistrates that they are up to no good. This is a large group—about 5% of those who intend to go to Portugal, and two and a half times as many people as the National Criminal Intelligence Service was worried about four years ago. If there truly is a hooligan hard-core, it will surely be removed from the picture.

The other idea, that England's hooligans are ordinary men struggling with some momentary self-definition issues, has revolutionised Portuguese police tactics. A force that generally follows the standard Mediterranean model of crowd control (“keep out of the way and then, when something happens, respond with overwhelming force,” as David Swift, of the Association of Chief Police Officers, puts it) will test a softer line. English-speaking police will mingle with crowds of fans and try to pick off troublemakers unobtrusively rather than forming a line for the mob to charge at.

Police and academics on both sides of the crowd-control debate reckon that the championship will pass off smoothly—or at least, that it will witness no more violence than the average English town on the average Saturday night. Those who believe in pathological hooliganism reckon that the right people have been banned; those who believe in crowd management say that the Portuguese coppers have learned their lessons well. Whether either camp is right is, of course, another matter. Keep your fingers crossed.

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Private universities

The law and the profits

Jun 10th 2004
From The Economist print edition

Private competition is looming in a lucrative business for universities

BRITISH universities like students who pay big fees. They are less happy to deliver the corresponding service. The hefty fees paid by foreign and postgraduate students are siphoned off to subsidise research and the unprofitable teaching of British undergraduates.

That creates a gap, and into it is marching a private company, BPP, which is already the country's largest provider of professional training. BPP already looks a bit like a private university: it teaches some 20,000 students in 32 centres in Britain, in subjects such as accounting and law.

But other bits aren't like a British university at all: there's no sign of state planning; the staff are better paid, the buildings smarter, technology swisher, morale higher. Administration is leanly businesslike; there's no money spent on research—just a lot of high-quality teaching.

“They have a much more focused view in producing something that their client is after. Universities are not responding to customer demand in the same way,” says a senior partner at one of the five big British law firms that is contracting its training exclusively to BPP from 2006.

Until recently, BPP did not award degrees: that is the privilege of officially recognised universities. Now things are changing, chiefly in the booming business of legal training. From September, it will be offering a postgraduate law degree, including the courses needed to become a solicitor. It won't, technically, be a degree from BPP: the firm is renting that right for an undisclosed sum from the University of Central Lancashire, which is “validating” the course.

That's an odd deal. To get round regulation, the stronger party seeks endorsement from the weaker one. The Lancastrian courses, at £3,000, are only a third the price of the BPP ones. Whereas BPP's law teaching is one of only five outfits rated “excellent” by the Law Society, the solicitor's self-regulating body, Lancashire's is in the average category of “very good” (anything less than “good” is disastrous).

Carl Lygo, chief executive of the BPP law school, says that these hybrid products, combining an academic and a professional qualification, are the fastest-growing bit of the company's business. In 2008, once new rules governing teaching-only universities are in place, he expects BPP to apply for university status. In the meantime, active discussions with other impoverished vice-chancellors are under way. “If the market's there, we'll teach it, so long as it's white-collar,” he says.

So what happens now? In America, for-profit universities such as Phoenix have already made inroads into the higher-education business. So one might think that British universities might be a bit worried, as an aggressive competitor chomps up their customers. Not so: the vice-chancellor of one London university whose postgraduate law courses are seen as a prime competitive target by BPP has never heard of the company. A senior manager at another law school was shocked to hear that BPP charged more than its competitors, and paid its staff better. “We take a holistic approach,” he says, brushing aside the idea that BPP might be taking the best staff and most ambitious students.

Other established outfits are savvier. The College of Law, the country's biggest law school, has a tight customer focus too. It has persuaded the Law Society to approve tailor-made courses for the three big law firms that it serves exclusively. BPP says if the idea works, it will copy it. But a lawyer who has studied at both outfits says BPP is better: “They know that the main thing is to get you through the exams,” she says. “The other places tell you all this stuff you don't need to know.”

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About sponsorship

Untranslatable words

Wigscratchingly tricky

Jun 10th 2004
From The Economist print edition

If you think English words are hard to translate, look at some foreign ones

A LEAPFROG appeal is an interesting bit of the English legal system: in a case of sufficient public importance, the appeal may go straight from the High Court to the House of Lords, bypassing the Court of Appeal. For those familiar with the children's game of leapfrog, it's a useful metaphor. But how to translate it? The game of leapfrog is *Bockspringen* in German [literally deer-jumping], *saute-mouton* in French [sheep-jump].

There are circumlocutions and rough equivalents—*Sprungrevision* [literally "jump-appeal"] in German, for example. But in a survey of 1,000 professional legal translators by Today Translations, a specialist London firm, "leapfrog appeal" was voted the hardest English legal phrase to translate, closely followed by "toxic tort" (harmful exposure to a poisonous chemical). Other troubling legal arcana included "Michaelmas term" (court sittings between November 2nd and 25th).

It cuts both ways. Untranslatable words, especially from big widely used languages, usually migrate untranslated: panache and schadenfreude are now English words, *le weekend* and *das Briefing* are embedded in French and German. But from smaller languages, things can be tricky. Esperanto, for example, has a verb *krokodili* meaning "to speak your native language when everyone else is speaking Esperanto"—more euphonious than useful, perhaps.

The survey highlighted ten particularly difficult such words. Top of the list came *ilunga*, a word in Tshiluba (a central African language) for a person who tolerates abuse only twice. That was closely followed by *shlimazl*, Yiddish for a chronically unlucky person. Like a legal translator, perhaps.

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About sponsorship

Telecoms

Back from the dead

Jun 10th 2004
From The Economist print edition

Two notorious telecoms firms are, surprisingly, showing signs of health

FOR American investors, the telecoms boom and subsequent bust brings to mind such firms as WorldCom, a long-distance carrier whose bankruptcy in 2002 was the biggest ever, and Nortel, a Canadian equipment-maker whose market capitalisation fell from a peak of $250 billion to less than $2 billion. For British investors, however, the telecoms crash is inextricably associated with two spectacularly clueless British firms: Cable & Wireless, a network operator, and Marconi, an equipment-maker. C&W's share price fell from £15.62 at its peak to 41p; Marconi's fell from £12.50 to 0.6p. Both firms were ejected from the FTSE 100—and a lot of investors lost their shirts.

But now things are looking up. C&W's latest annual results, released last week, showed that revenues grew at its core British unit for the first time in three years, margins expanded from 3% to 9%, pre-tax profit nearly tripled to £317m and overall losses narrowed to £224m. It also reinstated the payment of dividends; its shares duly jumped. Marconi, for its part, last month announced its first quarterly profit for three years. Both companies have been awarded “buy” ratings by analysts—a sign that they are back from the dead.

The two firms' stories are similar. Both made bad decisions, compounded by bad timing, as the telecoms bubble inflated in the late 1990s. C&W, following the conventional wisdom of the time, piled into the long-haul data-networking business, backing away from its local-phone operations in Britain and its former colonies (hangovers from C&W's historical roots as operator of the British empire's communications network). Since everyone else was doing the same, C&W found itself in a glutted market. It then made things worse by moving into the web-hosting market in 2001 just as it crashed too.

Marconi was created in 1999 when GEC, an industrial conglomerate, decided to focus on the then-booming telecoms sector. It bought two American equipment-makers at top-dollar prices, but GEC's stodgy industrial heritage meant that it was unable to finance these acquisitions using shares, and paid cash instead, running up huge debts. Then, as network operators started to go under, demand for telecoms equipment dried up and Marconi's business collapsed.

At both firms, new management teams set about cutting costs, shedding jobs, closing down loss-making divisions and reducing debt. C&W was in such a mess when its new chief executive, Francesco Caio, took over last year that basic operational information (such as a complete list of its British customers) was simply unknown. The new management's honesty about the extent of the trouble, and its evident zeal in fixing it, has impressed investors. Marconi's fortunes turned last year when its new boss, Mike Parton, persuaded creditors to forgive £4 billion in debt in return for majority ownership.

In both cases, however, the “buy” ratings signify scope for further cost-cutting and operational improvements, rather than confidence in the companies' long-term prospects. Mr Caio says his plan is to become the number two operator in Britain, and a leading provider of telecoms services in small countries overseas. C&W's experience as a local-network operator in many parts of the world means it knows how to manage the transition from closed to liberalised markets, says Andrew Darley of ING. So it is now picking up small, cash-generating incumbent operators: it has just bought Monaco's and is looking at Oman's. In Britain, the company hopes to benefit from the take-off of broadband, and has just bought Bulldog, a specialist broadband operator, which will help it compete with BT.

Marconi's long-term plan is less clear. Most of its customers are in Europe: BT accounts for 20% of its sales. It spends only a sixth of what its larger rivals, Nortel and Alcatel, can spend on R&D, and 80% of that is focused on the specific needs of its existing customers. “That's a great recipe for survival, but not for long-term growth,” says Mark Davies Jones, an analyst at J.P. Morgan. In the long term, its most

valuable asset may be its close ties with European operators such as BT, Telecom Italia and Belgacom. For an acquisitive Asian vendor looking to break into the European market, Marconi's regional focus could look like a strength rather than a weakness.

In short, both C&W and Marconi are reviving. But a return to full health remains some way off.

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About sponsorship

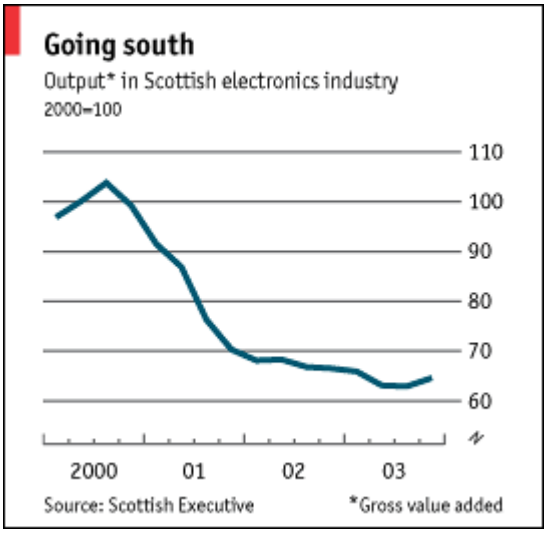
Scottish electronics

Small is better than nothing

Jun 10th 2004 | EDINBURGH
From The Economist print edition

Silicon Glen may be alive again

IMRAN Khand, chief executive of Picsel Technologies, a six-year-old software company, spreads his arms wide and grins: “We can't hire fast enough. Business is very, very good.” His optimism is shared by many Scottish electronics firms. After three years in which output and jobs slumped, things seem to have bottomed out (see chart), and businessmen think they are now picking up.



Silicon Glen's problem was that much of its product was low-value, high-volume assembly work by big American and Asian firms lured in by subsidies. So when recession hit the IT industry in 2000, jobs moved to Asia and eastern Europe in search of cheaper labour. Big closures such as Motorola's mobile phone factory (3,000 jobs) and NEC's semiconductor plant (1,000 jobs) saw employment slashed from 62,300 jobs in 1999 to 41,200 now.

There were, however, some Scottish winners from the cost-cutting fever. Big manufacturers like Xerox outsourced a lot of their work to the minnows. That enabled firms such as Simclar—a maker of cable systems, plastic mouldings, metal cabinets and printed circuit boards—to replace traumatic losses like a contract turning out 20,000 PCs a week for IBM. Simclar was also financially robust enough to buy recession-hit rivals cheaply. The firm now employs 2,300 people, a quarter of them in America.

The big hope for the future is that the numerous small firms (Scotland has 2,900 software companies) can forge partnership deals with large firms to take them into the big time. Picsel, which has doubled its workforce to 160 in the last year, is heading that way. Its web-browsing software for hand-held devices, a hot but highly competitive market, is now being used on PDAs and mobile phones being sold by Sony and Motorola.

Economic forecasters at the Fraser of Allander Institute reckon growth from this type of activity will be much slower than in the previous boom. But this time the bets are more evenly spread.

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About sponsorship

Housing market

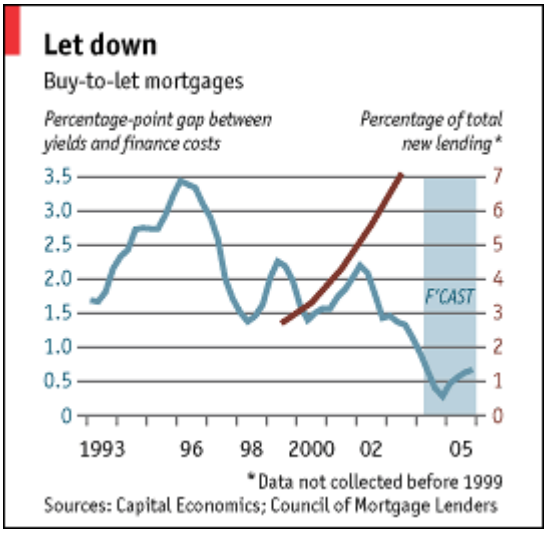
Buy to let go

Jun 10th 2004
From The Economist print edition

Will rising interest rates kill off the buy-to-let movement?

IN THE enclosure movement of the 18th century, greedy landlords snapped up the land the commonfolk had tilled, reducing the proud yeoman farmer to the status of an unpropertied tenant. To hear some tell it, we are living through a second enclosure movement today, as landlords take advantage of buy-to-let mortgages to snap up "starter" homes all over the country, leaving would-be homeowners as propertyless tenants. Between 2001 and 2003, the number of mortgages made to buy-to-let investors rose by 223,300, according to the Council of Mortgage Lenders (CML). Over the same period, the number granted to first-time buyers fell by 207,000.

Nothing could stop the first enclosure movement. But the second may be thwarted by the Bank of England. Most of those who buy in order to let, borrow in order to buy. And the costs of borrowing are rising. On June 10th, the Bank raised interest rates another quarter point to 4.5%— the fourth rise in eight months. Mortgages are thus becoming more costly, even as the houses investors hope to purchase become ever more expensive.



Though growing fast, buy-to-let loans still accounted for just 7.1% of the money lent by mortgage providers last year (see chart). And the surge in loan-making may overstate the size of the phenomenon, argues Ed Stansfield of Capital Economics. Not all of the £11.7 billion lent in the second half of 2003 was used to turn homes into rent-machines. As much as £4.45 billion went to existing landlords switching from traditional, and more expensive, commercial loans to cheaper buy-to-let mortgages. "Buy-to-let" is "just a new label for an old activity," he writes.

But a new breed does seem to be taking up this old activity. Individuals and couples owned less than half of the private rented stock in England in 1994, according to the government. By 2001, they held almost two-thirds of it: 30% of private landlords now own just one property.

How vulnerable is this buy-to-let market to tighter money? Rents are edging up again (although in parts of London, flats are standing empty for longer), and house prices are rising even faster. It is thus not a bad time to be an amateur landlord. But it is a bad time to become one. According to Capital Economics, someone who buys now, at inflated prices and higher interest rates, will barely cover the cost of his borrowing with the rents he collects (see chart). Some landlords may actually lose money, once the costs of replacing lightbulbs and unblocking drains are added.

Will this deter new investors? Many buy-to-letters fancy themselves as speculators, not rent-collectors. They hope to sell their overpriced properties at still higher prices in the future. Indeed, some analysts fear that they provide the "hot money" in the housing market. They are relatively liquid and account for a disproportionate share of transactions, according to Andrew Farlow, an economist at Oxford University. Since the vast bulk of properties do not change hands in any given year, prices are set by the few that do.

David Pannell, of Durlacher, an investment bank, characterises buy-to-letters as "pension refugees". They have fled from disappointing stock markets into an enticing housing market. If that too disappoints,

they will flee elsewhere.

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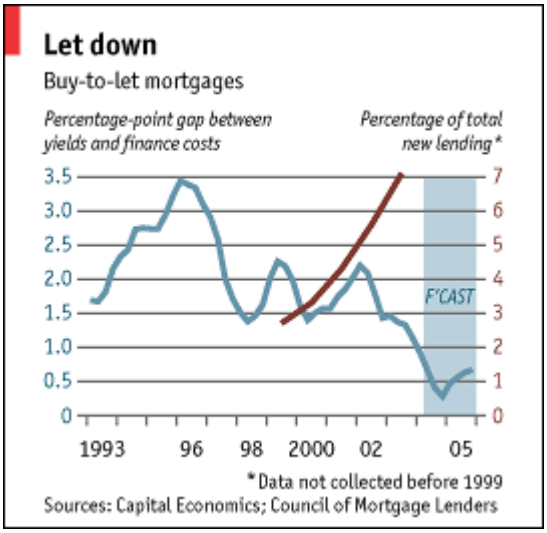

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Bagehot

A special relationship

Jun 10th 2004
From The Economist print edition

Shared beliefs did not prevent Margaret Thatcher and Ronald Reagan having spats

THERE will be few moments during Ronald Reagan's funeral service on Friday more affecting than Lady Thatcher's ten-minute eulogy. It will not just be the warmth of Lady Thatcher's words which will stir emotions and memories. There will be added poignancy because, despite her insistence on being present in the National Cathedral to say goodbye to her old friend, increasing frailty and medical advice forced her to record her tribute before Mr Reagan's death.

But before succumbing entirely to sentiment, it is worth recalling that theirs was a complicated and often tempestuous relationship. They were drawn together from the outset by a shared belief in the moral superiority of societies founded on free enterprise and the imperative which followed from that of confronting internationally the menace of Soviet communism. They also took real delight in each other's company. He admired her poise and steely intelligence. She was charmed by his good humour and beautiful manners. But their personalities and the way they worked could hardly have been more distinct. And the different ways they responded to events led, at times, to considerable tension between them.

While Mr Reagan believed in setting the broad direction for his administration and delegating the detail of policy and its implementation, Lady Thatcher reckoned that the only way to keep her ministers honest was to know as much about their departments as they did themselves. While Lady Thatcher maintained a punishing schedule, rarely sleeping more than four hours a night and resenting the interruptions caused by other people's holidays, Mr Reagan lived up to his oft-quoted quip: “It's true hard work never killed anybody, but I figure, why take the chance?” While Mr Reagan radiated a sunny “it'll be all right on the night” cheerfulness, Lady Thatcher had a darker, more Tory, view of human nature.

One big difference in the early days of their governments was over economic policy. Although both set out to liberate their economies, Lady Thatcher, a shopkeeper's daughter at heart, believed that tax cuts were the prize for getting spending under control. By contrast, Mr Reagan thought it just fine to slash taxes, while leaving the job of cutting spending to others (and when they didn't, that was just fine too). The British government disapproved of Reaganomics' spiralling trade and budget deficits and their impact on the international financial system, not least in the form of the surging dollar.

But those disagreements were nothing compared to the anguish caused by Mr Reagan's ambivalence over the Falklands. Friendship and the ties of the special relationship aside, the prime minister assumed that the illegality of the Argentine invasion in early 1982 and the need to support a NATO ally acting in self-defence would mean unstinting support from her chum in the White House. When Mr Reagan made it clear that America's role was to act as an honest broker mediating between two allies and trying to

prevent the retaking of the islands by force, the prime minister felt something close to betrayal.

After weeks of fruitless shuttle diplomacy by Alexander Haig, Mr Reagan's erratic secretary of state, and increasingly bizarre behaviour on the part of Jeane Kirkpatrick, the pro-Argentine UN ambassador, the junta's intransigence finally pushed the president off the fence. But as far as the British government was concerned, it was not the president who was the hero of the hour, but the defence secretary, Caspar Weinberger, who, on his own initiative, provided the task force with vital intelligence and with urgently requested air-to-air missiles. It took all of Lady Thatcher's self-control to conceal her dismay over Mr Reagan's dithering.

The falling-out over the American invasion of the tiny Commonwealth island of Grenada 18 months later was more public, but impinged less directly on British interests. Lady Thatcher believed the invasion would give the Soviet Union an excuse to intervene wherever it felt like doing so. Worse still, the White House had failed to warn her about what was to happen, thus reopening the controversy over the launch procedures of the American cruise missiles about to be deployed in Britain.

Disarming

Mr Reagan's apparent willingness to do a deal with Mikhail Gorbachev at Reykjavik in 1986 to scrap all nuclear weapons was a far more serious affair. Lady Thatcher had persuaded the president that Mr Gorbachev was a man one could do business with, but this was ridiculous. Never mind that in practice nuclear weapons could never be disinvented. Had Mr Reagan forgotten that it was nuclear weapons that had kept the peace in Europe by offsetting the overwhelming superiority of Soviet conventional forces? It was clear to Lady Thatcher that Mr Reagan had fallen head first into a none-too-subtle Soviet trap. A hastily convened meeting with the president at Camp David restored some sanity to the continuing arms-control negotiations. But her confidence in his judgment had been shaken once again.

Still, Lady Thatcher could never stay angry with Mr Reagan for very long. She blamed his lapses on malign subordinates (which says something of her view of his grip on the job). And, following the upsets, he would apologise as only he knew how. After Grenada, he rang to say that next time he dropped in on her he would be sure to throw his hat through the door first. He exasperated her, but still she loved him and he loved her back.

And for all the tiffs, it is easy to understand why. Mr Reagan and Lady Thatcher were both political outsiders—optimistic radicals, initially sneered at and patronised by party establishments steeped in the tradition of conservative pessimism. They encouraged each other, validated each other and, in consequence, needed each other.

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MONITOR

Shape of phones to come

Jun 10th 2004
From The Economist print edition

Innovation: What is the best shape for a mobile handset—and what will the devices of the future look like?

Get article background

IS YOURS a candy bar, a clamshell, a jack-knife or a taco—and is it about to disappear, or break into several pieces? We are talking, of course, about mobile phones. Just a few years ago, they resembled bricks, but they now come in a baffling variety of shapes, sizes, colours and designs. This sudden proliferation of new handset shapes has been caused by the convergence of two trends: the mobile phone's growing importance as a fashion item, and advances in handset technology. Where will it all end?

The first company to realise what was going on was Nokia, the world's leading handset-maker. “We understood that the devices weren't technical devices any more but part of the end-user's personality,” says Eero Miettinen, director of design at Nokia. In October 1999, the Finnish company set a trend when it launched its 8210 handset on the catwalk at fashion week in Paris. Design has since become an important way for handset-makers to make their products stand out. Siemens, for example, now sells a special collection of fashion handsets under the “Xelibri” brand.

The variety of handset designs has dramatically expanded in the past couple of years in particular as phones with colour screens and built-in cameras have become more popular. Around 70% of the handsets sold this year will have colour screens, up from 38% last year, and 44% will have built-in

cameras, up from 17% in 2003, according to UBS, an investment bank. The popularity of large colour screens has been driven by the growing adoption of data services such as web-browsing and downloading games and screen graphics. Furthermore, mobile phones can now be music players, photo albums and personal organisers too. The challenge of integrating all these new features into what was previously a voice-centric device has led to a flowering of innovative new designs.

In Japan and South Korea, where data services first took hold, the desire for a large screen in a small device led to the popularity of the clamshell, or “flip-phone” design. Allowing the phone to open and close protects the screen and also provides plenty of room for both display and keypad. Clamshells are now popular all over the world. Indeed, Nokia's traditional preference for one-piece “candy bar” designs over clamshells has been widely blamed for the company's recent drop-off in sales. Nokia hopes that new models, being unveiled next week and expected to include several clamshells, will help to revitalise its sales. And its first mainstream third-generation phone, the 7600, is proving popular.

But some observers believe Nokia may have lost its edge in design to its smaller rivals. Sony Ericsson, for example, has championed a clever new shape, called the swivel or jack-knife style, in camera-phones such as the SO505i, developed for the Japanese market, and the forthcoming S700, for the rest of the world. When closed, the S700 resembles a camera, with a lens on the front and a large screen on the back. Its controls are deliberately modelled on those of a Sony digital camera. It can then be swivelled open, to reveal a standard mobile-phone keypad. “We believe form should follow function in a very classical way,” says Hiroshi Nakaizumi, the head of Sony Ericsson's design centre.

Part of the appeal of the jack-knife design is that some Japanese consumers are getting bored with the clamshell design. But it is wrong to think that any one design will dominate in future, says Mr Nakaizumi. Instead, different types of users will want different styles, depending on whether they mainly use the devices for voice calls, text messaging, music or games. He suggests that five years from now, the market will roughly divide into three categories: traditional voice-centric handsets, “Swiss Army knife”-style phones that try to do everything (such as Sony Ericsson's own P900), and task-specific phones aimed at particular types of users, for whom telephony may be a secondary function.

Some such devices of this last type have already appeared, such as Nokia's N-Gage gaming console, the BlackBerry e-mail handheld (to which telephony functions have been added without changing its shape), and the slim digital camera that happens to be a phone as well, made by NEC for the Chinese market. The mobile phone could, in other words, be subsumed into another gizmo and disappear altogether, for some types of specialist users at least.

But an altogether more radical possibility is that the current “all in one” approach will give way to a more modular design, in which a basic handset is supplemented by add-ons connected via short-range “Bluetooth” wireless links. Owners of Bluetooth-capable phones can already make and receive calls with just a small headset or earpiece, while the handset sits in a nearby pocket, briefcase or handbag. The next step is to extend this approach to other devices. For example, a Bluetooth-equipped camera could send and receive pictures via a nearby handset, and a handheld gaming console could download new games and communicate with other players. The phone would act as a gateway between specialised local devices and the cellular network.

It is unclear whether or not this modular approach will appeal to consumers. The success of Apple's iPod, for example, which does one thing (playing music) and does it very well, may mean that task-specific phones will prove more popular than modular ones. And for users who want more functionality, the Swiss Army-knife approach has the advantage that you cannot leave bits of it behind, as you could with a modular phone. That said, the modular approach could make possible all kinds of radical designs, such as sunglasses or jewellery that also function as mobile headsets or display text messages.

There are already several examples of such techno-jewellery. The clip-shaped Xelibri 7 handset from Siemens, for example, is designed to be worn on the strap of a shoulder bag. “It looks familiar, but has a surprise built into it,” says Leif Huff of IDEO, the firm that designed the latest range of Xelibri phones. Nokia, meanwhile, has launched a Bluetooth-compatible pendant containing a small screen. But while wearing a wireless headset is starting to become more socially acceptable, wearing your phone is still considered geeky, Mr Huff observes.

What is clear is that the mobile handset is now much more than just a phone, and depending on what else you want to do with it, it may assume a very different shape altogether. It may even need a new name. Indeed, at Motorola, the second-biggest handset-maker, the term “cell phone” has now been banned. The handset is now turning into more of a “personal network device” says Tom Lynch, president

of Motorola's handset business. “We are trying to think more broadly about it,” he says, “which is why we call it ‘the device formerly known as the cell phone'.”

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MONITOR

The end of your tether?

Jun 10th 2004
From The Economist print edition

Wireless recharging: Even the whizziest mobile phone or laptop needs one last, solitary wire—to recharge its batteries. Or does it?

IT SOUNDS like a great idea: no charger, no wire, no plugging in, just put down your mobile phone, laptop or whatever—or indeed several devices at once—on a pad the size of a mouse mat, and they will recharge. The trouble is, it sounded like a great idea when two rival developers of wire-free charging announced it in late 2002—but neither firm has yet delivered on its promises. Is the dream of doing away with the “last wire” simply too good to be true?

The first company, MobileWise, which is based in Palo Alto, California, originally claimed that Acer, a Taiwanese electronics firm, would launch products incorporating its technology in early 2003. Over a year later, no such products have appeared, and MobileWise has been busy installing a new management team. Splashpower, a rival firm based in Cambridge, England, was more cautious, but today looks nearer a market launch.

The company has been working since mid-2003 with Celltronix, a component-maker based in Hong Kong. Herve Jegou, the boss of Celltronix, says his firm plans to make Splashpower-enabled power systems available to device-makers by the end of this year. Splashpower claims “very strong” interest from both consumer-electronics makers and mobile operators eager not to lose business when their customers' phones run out of juice.

Both recharging technologies, which work in quite distinct ways, require devices to be designed to work with them. The MobileWise approach involves a charging pad, the surface of which is covered with a regular pattern of bobbles (nubs). When a suitably equipped device is placed on the pad, an adapter on its base makes contact with the nubs. A special chip inside the device then communicates with the pad to request electrical power at the correct voltage and polarity. Two nubs are then activated and the device recharges. The pad can deliver enough power to recharge several different devices at once, each at a different voltage if necessary. The challenge is to ensure a good contact. Other nubs are not powered and are safe to touch.

Splashpower's technology, in contrast, relies on magnetic induction. A receiving module built into the device to be charged picks up power from the charging pad's magnetic field. The device has to be within a few millimetres of the pad's surface, and the power that can be transmitted is, so far, enough only for small devices like phones or handheld computers. But there is no trouble ensuring contact, since none is needed, and the pad can be enclosed, for instance, in a waterproof coating, in case you spill your coffee on it while your phone is charging.

The real challenge, however, is not the technology but the market. The big consumer-electronics manufacturers, such as Nokia and Sony, have to be convinced to support the technology. Both MobileWise and Splashpower say that their recharging adapters can be incorporated into existing designs with very little modification, and at low cost. But this might all turn out to be a brilliant solution to a non-existent problem. Do you really mind plugging in your mobile phone or music player to recharge?

And even if you do, there remains the chicken-and-egg problem that nobody will buy recharging pads unless their devices support the technology, but there is no point modifying devices to support the technology if nobody has a recharging pad. Furthermore, travellers who currently carry several chargers around with them, along with plug adapters for different countries' various electrical outlets, may not find carrying a six-by-four-inch recharging pad (plus all those adapters) any more convenient.

One way around this problem, being investigated by Celltronix, would be to make new batteries with

support for wireless recharging that can be retro-fitted to existing devices as “after-market” upgrades. But many mobile-phone makers make it deliberately difficult to slot batteries made by third parties into their handsets, supposedly for safety reasons. And on the latest phones, the battery is not always an external component, so this approach would only work for some models. The last wire looks as though it will be around for some time yet.

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MONITOR

Background illumination

Jun 10th 2004
From The Economist print edition

Consumer electronics: Could everyday household furnishings be the unobtrusive information-display devices of the future?

The market is up—or it's mild outside

IT IS an experience often likened to drinking from a fire hose. The proliferation of broadband internet connections, cable-news channels and mobile phones has made it easier than ever to access all the information you could possibly want. But technologies to filter this information when you are busy, and give you just the information you actually need, have not kept up. Ambient Devices, a start-up company spun out of the Massachusetts Institute of Technology, is taking a novel approach to solving this problem. It has devised a subtle way to embed the display of information in a range of household objects that would not look out of place in a funky furnishings catalogue.

It sells a frosted-glass orb, for example, that can change colour in line with a stockmarket index, and a glass brick that pulses and changes colour to indicate the weather. And in August it will launch the Dashboard, a desktop ornament with three large meters that resembles a retro-styled stereo. Each meter can be set to display one of a range of variables, from the pollen count to sports scores to the weight of traffic on a particular route. As with Ambient's other products, the meters are updated every few minutes over a national wireless network.

The problem with existing information-display systems, says David Rose, the firm's chief executive, is that they provide too much detail and are too intrusive. By mapping information on to visual clues that can be taken in at a glance, Ambient's products are intended to provide an unobtrusive alternative. “There's a fallacy that more details are better,” he says. “What you actually want is awareness first and details on demand.” Mr Rose has one of his firm's weather bricks in his hall so that he knows which coat to wear, for example. He knows to wear a particular coat if the brick is dark blue, and to carry an umbrella if it is pulsing. But he does not need to know the exact details of the forecast to make this decision.

Filtering information in this way makes sense, says David Lewis, a psychologist who advises aircraft-makers on cockpit design, since trying to process too much information is a source of stress and can lead to mistakes. “Taking a burden off people may free up their thinking capacity to make more decisions and consider more options,” he says.

The Dashboard will offer a wider range of information sources than any of Ambient's previous products, including forecasts for skiers, sailors and fishing enthusiasts. But even that is not enough for some people, who are creating custom data feeds using a developer kit. One would-be parent is using an orb to track his wife's fertility; another user is tracking the energy use in his Manhattan apartment relative to similar apartments, to see if he is being an energy hog. There are even plans to link orbs to satellite-tracking devices carried by family members, so that their loved ones can see how far they are from home.

For his part, Mr Rose is experimenting with the use of ambient information in business, using an orb to track daily sales. The Dashboard can also be configured to monitor the volume of traffic to a corporate website. And the company has installed motor-driven windmills to display the relative performance of five sales teams at a financial-services company: the more they sell, the faster the windmills spin.

But Ambient Devices expects the greatest demand for its products to come from money-rich but time-poor consumers. “The cost of your attention is what is at a premium here,” says Mr Rose. The firm has licensed its technology to consumer-electronics firms including Sony, Samsung and Philips, and will launch a desktop weather station in conjunction with Radio Shack, an American gadget retailer, this summer. It also plans to enable its devices to work in Britain later in the year, using a radio network provided by O2, a mobile-network operator. The company believes its novel approach to information display has a bright, but unobtrusive, future.

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MONITOR

Once again, with feeling

Jun 10th 2004
From The Economist print edition

Sensory feedback: Adding the sense of touch to artificial limbs could improve dexterity and make them feel more like part of the user's body

ARTIFICIAL limbs have come a long way since the humble hook and peg. Today's most advanced prosthetic forearms, for example, enable amputees to grasp and release objects at will by selectively flexing muscles in the remaining arm. But there is more to picking up and putting down objects than simply being able to open and close one's fingers. An egg needs to be handled differently from a heavy glass tumbler. What is missing from today's prosthetics is sensory feedback—in other words, the sense of touch.

Such feedback would not only help to improve dexterity and control, says Ken Horch, a bioengineer at the University of Utah, but might also make prosthetics feel much more like part of the body, rather than an appendage or extension to it, by closing the feedback loop between the device and the brain. But while much work has already been done to show how motor-neuron signals from the brain's motor cortex can be translated into control signals for motors, there has so far been little research into sensory feedback. Some scientists, however, are now beginning to close the loop.

In the past few months a dozen amputees were given the first glimpse of what it might be like to have a truly bionic arm. A group led by Dr Horch connected electrodes to peripheral nerves in the subjects' forearms to both record and stimulate neural signals to and from a robotic arm. Although the arm was not attached to the subjects, they were able to control it as though it were. Readings from force sensors in the gripper were translated into nerve impulses equivalent to pressure, enabling the patients to “feel” natural sensations as though through the device's fingers. This made it possible for them to gauge how much pressure to apply when commanding the motors to grip. In addition, position sensors in the robot's joints were translated into “proprioception” signals that enabled the subjects to feel the arm's position,

even when their eyes were closed.

What makes this kind of thing possible is that, remarkably, scientists have succeeded in decoding a lot of the neural signalling needed to create artificial sensations such as pressure and proprioception. Human skin is, for example, capable of sensing four different types of tactile sensation: contact, vibration, sustained pressure and skin stretch.

The real challenge now lies in developing ways to communicate with individual nerve fibres on a one-to-one basis, says Paolo Dario of the Scuola Superiore Sant'Anna in Pisa, Italy, who is heading an ambitious project called Cyberhand. Funded by the European Union to the tune of *euro*1.5 million ($1.8 million), it combines the results from research groups in four countries. The aim of the project is to develop a prosthetic hand controlled by a neural interface, capable of independent finger movement and sensory feedback.

Another researcher involved in the Cyberhand project, Ronald Riso of the Centre of Sensory-Motor Interaction at Aalborg University in Denmark, says the difficulty lies in developing electrodes small enough to communicate with single nerve fibres without moving. Without a near one-to-one mapping of electrodes to nerve fibres, the wrong kind of nerves could receive the wrong kind of stimulation, producing an unpleasant pins-and-needles sensation.

Dr Horch's electrodes achieve this one-to-one mapping but have to be temporarily implanted; after his tests they were pulled out. The Cyberhand team's solution is to try to encourage nerves to grow through “sieve electrodes” which, as their name implies, have lots of tiny holes in them. These problems, and the difficulties of getting approval for permanent implants, mean that sensation that is rich enough to convey the feeling of different textures is still a long way off. But for most amputees, being able to grip an object without dropping or crushing it would make a big difference.

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MONITOR

Press “print” for body parts

Jun 10th 2004
From The Economist print edition

Rapid prototyping: Advances in three-dimensional printing are opening up a number of new medical applications for the technology

LAST October surgeons in Dallas, Texas, successfully separated Ahmed and Mohamed Ibrahim, two-year-old Egyptian twins who were conjoined at the skull. The 34-hour procedure was a triumph of modern surgical techniques. But it was possible only because the surgeons had been able to plan the complicated operation by studying exact anatomical models of the twins' skulls and the vascular structures of their brains. More than a dozen solid three-dimensional models, made of transparent acrylic, were constructed using “rapid prototyping” machines with data derived from computer-tomography (CT) scans and magnetic-resonance imaging (MRI).This gave surgeons a unique view inside the boys' skulls that individual scans or even computer models do not allow.

Terry Wohlers, an American rapid-prototyping expert, believes it is only a matter of time before such machines become common fixtures in hospitals, with doctors and surgeons using them almost as routinely as they currently use X-rays. But he is not just talking about making models to prepare for difficult operations. In a few years, he says, these ingenious machines will be able to produce replacement body parts such as teeth, bones and even entire organs.

Rapid-prototyping machines are, in effect, three-dimensional printers. They build up layer upon layer of a plastic, ceramic or metal, either by squirting the material out of a nozzle in a controlled way or by melting successive layers of powders using a laser. Originally developed to help designers and engineers visualise their inventions before going to the trouble of actually building them, the machines have now become so sophisticated that it is possible to print devices with moving parts.

Medical and dental specialists were quick to spot an opportunity. Rapid-prototyping machines have, for example, shortened the casting process for facial and cranial plates used in reconstructive surgery, says Robin Richards at the department of medical physics at University College, London. This is normally a lengthy and highly skilled manual process involving multiple wax moulds. Often, in the case of jaw or face plates, the only way to make the mould is to take a plaster cast of the outside of the patient's head, says Dr Richards.

But with a rapid-prototyping machine it is possible to produce a cast more quickly and accurately, using CT scans. Better still, it can make the operation to fit the plate far smoother, since there is no need for the surgeon to bend and reshape the plate to ensure it fits precisely. It also means smaller incisions are necessary, says Andy Christensen of Medical Modelling, the Colorado-based company that modelled the Egyptian twins.

So far, however, the rapid-prototyping machine simply produces an accurately shaped mould from which the plate is cast. The next step, says Mr Wohlers, is to cut out the casting process and print the plate directly. Wilhelm Meiners and his colleagues at the Fraunhofer Institute for Laser Technology in Aachen, Germany, are one group working to extend the technology to print reconstructive facial plates and even load-bearing artificial joints, such as hips, which could be customised for each patient.

Meanwhile, researchers at Advanced Ceramics Research in Tucson, Arizona, are developing rapid prototyping to create replacement bones, with funding from America's Office of Naval Research. The idea is that a patient with a shattered arm, for example, would have a section of replacement polymer bone made using data from CT and MRI scans. The artificial bone, porous and coated with a thin layer of calcium phosphate, is implanted into the arm in place of the damaged bone. Within a few weeks, the remaining real bone attaches itself to the implant and grows through the porous scaffold, encasing the implant in living bone within 18 months. The technique has already been successfully demonstrated in

rats.

The next step will be to apply the technology to printing body organs, which would be built up by arranging individual cells, one layer at a time. According to Gregory Gratson, a researcher at the University of Illinois Urbana-Champaign, the printing process is quite benign, so living cells grown in culture should be able to survive it. Printing artificial organs could then make up for the lack of donor organs. It will, however, require printers capable of producing far finer details than are currently possible, in order to recreate the tiny cellular structures in livers and kidneys. But progress in the field is rapid. Results published earlier this year by Dr Gratson and his colleague Jennifer Lewis show that they have refined the 3D printing process to produce structures just 0.5 microns (millionths of a metre) across. This is a hundred times smaller than previously possible, and small enough to allow research into organ-printing to begin in earnest.

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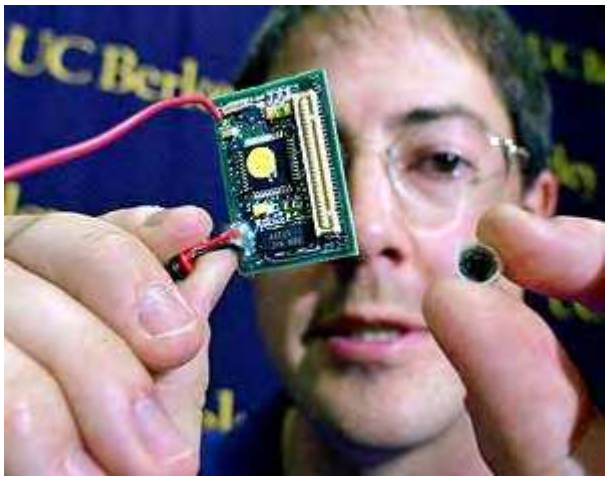
MONITOR

In dust we trust

Jun 10th 2004
From The Economist print edition

Sensor networks: They have generated a lot of hype. But might sensor networks, also known as "smart dust", actually be useful?

AP



Here's dust in your eye

WITH everyone in the technology industry looking for the next big thing, some researchers are thinking small. There are the nanotechnologists, of course, and those trying to cram the power and versatility of a personal computer into a pocket-sized device. And then there are the proponents of sensor networks, a technology more glamorously known as "smart dust". They believe that tiny devices, embedded in everyday objects or even just sprinkled on the ground, and talking to each other using wireless links, could have a range of military, commercial and even domestic uses. How does the reality compare with the hype?

The most ambitious experiment yet in this nascent field is currently plying the North Atlantic, in the form of the 885-foot oil tanker, *Loch Rannoch*. The ship, one of a fleet operated by BP, an energy company, has been outfitted with 160 sensors called "motes" that measure things like vibrations in the ship's pumps, compressors and engines and pass on their readings using wireless links. BP wants to see if the network can help to predict equipment failures. It also wants to test the robustness of sensor networks.

"If you want to find an environment that is hostile to a self-configuring, self-powered mote network, you would definitely choose a ship," says Kenneth Douglas, a technologist at BP. The company is also considering using them in over 40 other projects. In the next three years BP expects such networks to start to bind together its information systems with its real-world resources. "Sensor networks bridge the gap between systems and the real world," says Mr Douglas.

Each sensor incorporates a microprocessor, a power source such as a small battery, and a two-way radio, in a package that could some day be as small as a grain of sand or even dust—hence the name "mote". Sensors can be installed quickly and easily, since they use self-configuring wireless links and have their own internal power supplies. They can, for example, monitor temperatures in a computer data-centre, feeding data into a control system which can adjust heating and cooling systems in response, saving power and maintenance costs.

The Institute of Electrical and Electronics Engineers (IEEE) has drawn up a standard communications protocol, called 802.15.4, for these tiny devices. The ZigBee Alliance, an industry group, hopes its ZigBee

standards will popularise 802.15.4 in the same way that the Wi-Fi Alliance popularised another IEEE standard, 802.11 (better known as Wi-Fi). The first Zigbee standards, for residential, industrial and building controls, should be agreed by the end of the year.

Believers in sensor networks often point to the growing use of radio-frequency identity (RFID) tags as evidence that embedding tiny wireless devices in everyday items makes commercial sense. RFID tags, which are typically the size of a grain of rice, do not contain a battery, but are woken up by a pulse of radio energy. This energy is absorbed and used to power up a small chip and transmit a response (usually an identification number). Long used to tag pets, RFID tags are now being used by retailers such as Wal-Mart and Tesco for inventory control, though this has raised fears about the potential to monitor customers, both before and after purchases are made. More capable sensors, which can do much more than RFID tags, may cause similar worries. BP, for example, has put sensors in its trucks to track their routes and monitor driver behaviour. Mr Douglas says such sensors are there strictly for safety reasons. He says the company is well aware of, and concerned about, the potential for invading privacy. But for now, motes are being used in benign and boring applications, such as switching lights on and off in a building in Chicago, monitoring temperature and pressure in a London underground station, and measuring seismic shivers in a building in earthquake-prone Berkeley, California.

Kris Pister, a leading researcher in the field and the founder of Dust Networks, a start-up based in Berkeley, says he was asked to evaluate the possibility of putting 50,000 motes in a new building, replacing the normal wired sensors for temperature control, power regulation, door opening and so on. But the limitations of existing sensor technology mean that such large networks are currently impossible: the largest network yet constructed was a mere 900 nodes, and it was dismantled after a weekend. That said, there may be a new record before the year's end: in December, researchers at Ohio University plan to demonstrate a 10,000-node sensor “fence” around ten square kilometres of corn fields, for the American military. But this is, again, a research project. Commercial applications are still in their infancy. That is one reason why Hans Mulder, a researcher at Intel, the world's largest chipmaker, is going around making a presentation entitled “Sensor Networks: Are They for Real?” (His answer is, of course, yes.)

Gordon Bell, a legendary figure in computing history, says networks of tiny devices are destined to become an important computing platform. He has invested in Dust and says the field is “barely in the Altair period,” referring to the pioneering personal computer of 1975. That would imply that there is substance behind the hype, but that sensor networks will not come into their own until around 2010.

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MONITOR

Inside the mind of the consumer

Jun 10th 2004
From The Economist print edition

Neuromarketing: Could brain-scanning technology provide an accurate way to assess the appeal of new products and the effectiveness of advertising?

MARKETING people are no longer prepared to take your word for it that you favour one product over another. They want to scan your brain to see which one you really prefer. Using the tools of neuroscientists, such as electroencephalogram (EEG) mapping and functional magnetic-resonance imaging (fMRI), they are trying to learn more about the mental processes behind purchasing decisions. The resulting fusion of neuroscience and marketing is, inevitably, being called “neuromarketing”.

The first person to apply brain-imaging technology in this way was Gerry Zaltman of Harvard University, in the late 1990s. The idea remained in obscurity until 2001, when BrightHouse, a marketing consultancy based in Atlanta, Georgia, set up a dedicated neuromarketing arm, BrightHouse Neurostrategies Group. (BrightHouse lists Coca-Cola, Delta Airlines and Home Depot among its clients.) But the company's name may itself simply be an example of clever marketing. BrightHouse does not scan people while showing them specific products or campaign ideas, but bases its work on the results of more general fMRI-based research into consumer preferences and decision-making carried out at Emory University in Atlanta.

Can brain scanning really be applied to marketing? The basic principle is not that different from focus groups and other traditional forms of market research. A volunteer lies in an fMRI machine and is shown images or video clips. In place of an interview or questionnaire, the subject's response is evaluated by monitoring brain activity. fMRI provides real-time images of brain activity, in which different areas “light up” depending on the level of blood flow. This provides clues to the subject's subconscious thought patterns. Neuroscientists know, for example, that the sense of self is associated with an area of the brain known as the medial prefrontal cortex. A flow of blood to that area while the subject is looking at a particular logo suggests that he or she identifies with that brand.

At first, it seemed that only companies in Europe were prepared to admit that they used neuromarketing. Two carmakers, DaimlerChrysler in Germany and Ford's European arm, ran pilot studies in 2003. But more recently, American companies have become more open about their use of neuromarketing. Lieberman Research Worldwide, a marketing firm based in Los Angeles, is collaborating with the California Institute of Technology (Caltech) to enable movie studios to market-test film trailers. More controversially, the *New York Times* recently reported that a political consultancy, FKF Research, has been studying the effectiveness of campaign commercials using neuromarketing techniques.

Whether all this is any more than a modern-day version of phrenology, the Victorian obsession with linking lumps and bumps in the skull to personality traits, is unclear. There have been no large-scale studies, so scans of a handful of subjects may not be a reliable guide to consumer behaviour in general. Of course, focus groups and surveys are flawed too: strong personalities can steer the outcomes of focus groups, and people do not always tell opinion pollsters the truth. And even honest people cannot always explain their preferences.

That is perhaps where neuromarketing has the most potential. Most people say they prefer the taste of Coke to Pepsi, but cannot say why. An unpublished study carried out last summer at the Baylor College of Medicine in Houston, Texas, found that most subjects preferred Pepsi in a blind tasting—fMRI scanning showed that drinking Pepsi lit up a region called the ventral putamen, which is one of the brain's “reward centres”, far more brightly than Coke. But when told which drink was which, most subjects said they preferred Coke, which suggests that its stronger brand outweighs Pepsi's more pleasant taste.

“People form many unconscious attitudes that are obviously beyond traditional methods that utilise introspection,” says Steven Quartz, a neuroscientist at Caltech who is collaborating with Lieberman

Research. With over $100 billion spent each year on marketing in America alone, any firm that can more accurately analyse how customers respond to products, brands and advertising could make a fortune.

Consumer advocates are wary. Gary Ruskin of Commercial Alert, a lobby group, thinks existing marketing techniques are powerful enough. “Already, marketing is deeply implicated in many serious pathologies,” he says. “That is especially true of children, who are suffering from an epidemic of marketing- related diseases, including obesity and type-2 diabetes. Neuromarketing is a tool to amplify these trends.”

Dr Quartz counters that neuromarketing techniques could equally be used for benign purposes. “There are ways to utilise these technologies to create more responsible advertising,” he says. Brain-scanning could, for example, be used to determine when people are capable of making free choices, to ensure that advertising falls within those bounds.

Another worry is that brain-scanning is an invasion of privacy and that information will be compiled on the preferences of specific individuals. But neuromarketing studies rely on small numbers of volunteer subjects, so that seems implausible. Critics also object to the use of medical equipment for frivolous rather than medical purposes. But as Tim Ambler, a neuromarketing researcher at the London Business School says: “A tool is a tool, and if the owner of the tool gets a decent rent for hiring it out, then that subsidises the cost of the equipment, and everybody wins.” Perhaps more brain-scanning will someday explain why some people like the idea of neuromarketing, but others do not.

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MONITOR

A long road ahead of it

Jun 10th 2004
From The Economist print edition

Transport: It was supposed to revolutionise transport and change the world. How is the Segway doing?

AP

Scooting into the future?

WHEN Dean Kamen, an American inventor, unveiled the ultra-secret Segway human transporter in December 2001, it was supposed to herald a transport revolution. It would, Mr Kamen declared, “be to the car what the car was to the horse and buggy”. John Doerr, the venture capitalist behind Amazon.com and Google, predicted that Segway, the eponymous company established to build the battery-powered super-scooters, would reach $1 billion in sales more quickly than any corporation in history. To handle the imminent consumer onslaught, Segway's factory in Bedford, New Hampshire, geared up to build 40,000 units a month.

There was no need, as it turned out. By the autumn of 2003, when Segway voluntarily recalled all the units it had sold to repair a problem that occasionally caused riders to fall off when the machine's batteries ran low, it transpired that only 6,000 of its human transporters had been sold, at an average of $4,500 each. Predictions that the Segway would prove to be as significant a breakthrough as the personal computer were evidently wide of the mark. The Segway has not, it seems, replaced cars, bicycles or feet.

Not yet, at least. But it is still in its infancy, insists Ronald Bills, Segway's chief executive. Given its limited distribution, he says, selling 6,000 units “was a huge number”. Until recently, Segway had only two major outlets: Brookstone Stores and Amazon.com. Mr Bills, who comes from the recreational-vehicle industry, says he is now taking a methodical approach to increasing sales, both by making the machines easier to buy and explaining to customers how Segways can fit into their lives.

When the Segway was introduced, Mr Bills admits, all of the focus was on the machine's technology, not its value. Now the company has opened 17 dealerships in America, and plans to expand to more than 50 by the end of the year. It also has its eyes on markets in Britain, Germany and Italy, all of which are densely populated and environmentally aware. For the first time in history, notes Mr Bills, more people now live in cities than in rural areas. Petrol is more expensive, short trips in large cars make less sense and space is at a premium. Surely a clean, fun and relatively inexpensive machine, on which to make short trips, makes perfect sense?

While their numbers may be small, there are some people for whom the Segway has entirely lived up to the hype. Phillip Torrone, a 28-year-old designer who lives in Seattle, Washington, is one example: indeed, he could be the poster child for the Segway lifestyle. Since buying his transporter, he has sold his car and “Segways” (yes, it can be a verb, just like Google or Amazon) to and from his office four miles away nearly every day. The machine has a maximum speed of 10mph (16kph) and works come rain or shine, he says, even in occasional slushy snowfalls, and handles Seattle's famously steep Queen Anne's Hill without a stutter. “For me this replaces 90% of the car trips in Seattle. You can pretty much go anywhere you need to go within four to seven miles,” he says. That is the Segway's transportation sweet-spot: distances that are too far to walk, but short enough that taking a huge sports-utility vehicle is overkill.

Mr Torrone uses his Segway to do his grocery shopping, run local errands and fatten his bank account. Because he no longer has any car payments, buys no petrol or insurance and has eliminated the cost of

parking, he estimates that he saves around $650 a month. Mr Torrone was not always a fan, however. It was his wife Elizabeth who originally decided to buy the transporter, and when she did he was sceptical. “Nothing could do everything this machine promised,” he remembers thinking. Now he calculates he has travelled 2,000 miles on it in 18 months.

But as Segway users go, Mr Torrone is unusually practical. Most of them are unabashed “early adopters” who like to play with new technologies. They regard the Segway—with its ingenious gyroscopic technology that lets them glide around simply by leaning in the direction they want to go—as a plaything. But the desire to promote and defend the Segway's undeniable technological elegance makes its owners fiercely loyal. Local clubs have popped up across America, and members also swap tips and sing the praises of their transporters on weblogs and online bulletin boards. In March, devotees in 20 cities united to create a national Segway Enthusiasts' Group.

Messages posted on Segway's website and at fan sites such as segwaychat.com gush with praise. “Riding a Segway is a liberating feeling that will tear down boundaries between you and everyone else” says one; “Will we segue from the automobile on to a battery-powered, two-wheeled moving transporter? The future is here. We're ready!” declares another. The Segway, proclaims one fan, “is an automatic facial exercise machine. You can't get on it without smiling!” These are not the sort of comments people volunteer about their washing machines—or even, in most cases, their cars.

But will the enthusiasm of these early adopters, and the new sales outlets Segway is creating, be enough to transform it from a fancy toy to a serious means of transport? At the company's base in Bedford, hope springs eternal. Although Mr Kamen's prediction that cities would have to be redesigned around the Segway shows no sign of coming true, Mr Bills likes to point out that it took decades for people to understand how cars could fit into and then transform their lives. “We are only in year two,” he says.

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MONITOR

A sandwich that packs a punch

Jun 10th 2004
From The Economist print edition

Materials: A novel manufacturing technique has produced a metal with the flexibility of rubber, which could have a wide range of uses

WHAT would an artificial muscle look like? It would move in response to an electrical signal, just as real muscles do. It would be flexible, to enable it to elongate and then return, unaffected, to its original shape. And it would be robust enough to stand up to repeated flexing. Artificial muscles that could do all this could replace bulky motors, electromagnets and other actuators in all kinds of devices. They do not exist yet—but their day may be approaching.

Several teams of researchers are working in the field. Already, they have fabricated materials that flex or contract when a voltage is applied. Researchers at SRI International, for example, a non-profit research institute based in Menlo Park, California, have created a muscle by sandwiching a rubbery substance between two electrically conducting layers made of carbon particles suspended in a kind of grease. When a voltage is applied to the outer layers, they attract one another, squashing the sandwich and making it up to twice as long and half as thin.

This is impressive, but at small sizes, metal electrodes can work even better than ones made of carbon. They conduct electricity better, making them faster and more energy efficient. But there is a catch: metal electrodes are much less flexible than carbon ones, which can constrain the muscle's ability to flex.

Rick Claus, an electrical engineer at the Virginia Polytechnic Institute in Blacksburg, Virginia, and Jennifer Lalli, a polymer chemist at NanoSonic, a spin-out from Virginia Tech, believe they have solved this problem. They have created a “metal rubber”—a substance that conducts electricity like a metal, but also stretches like rubber to up to 250% of its original length. This novel substance was made using a simple and relatively low-cost technology called “electrostatic self-assembly” in which a thin film of material is immersed in a solution containing positively charged ions, washed to remove any impurities, and then immersed in a second solution containing negatively charged ions (which stick to the positive ions on the preceding layer). The process is repeated to build up alternating layers of positive and negative ions on top of each other.

Dr Claus has already used this process to make a flexible kind of photovoltaic cell, made from alternating polymer and ceramic layers, that can be sewn on the outside of a tent. To create the metal rubber, layers of non-conducting polymers are alternated with layers of metal ions, such as gold, silver or platinum. The material can be made in sizes up to one foot square. The concentration of metal—as little as 2% by volume—is low enough not to constrain the material's elasticity, but high enough to conduct electricity.

In addition to making possible improved artificial muscles, this material could be used to make flexible electronic circuits, antennae or mirrors. Metal-rubber mirrors would be light and rugged, and would be ideal for use in cameras, space probes or satellites.

Clever though it is, this novel material is unlikely, in and of itself, to take on a starring role in high-tech products, admits Dr Claus. Instead, he imagines it invisibly improving the efficiency and effectiveness of existing devices. Furthermore, unlike most examples of nanotechnology, these new materials may be able to make the elusive transition from nano-sized materials (a nanometre is a billionth of a metre) to macro-sized components. “Part of the reason nanotechnology has not resulted in a lot of direct applications yet is that the technologies have not moved from the very small scale to the people-sized scale,” he says. “These materials are human-scale, and we think that's an important step.”

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MONITOR

From genetic code to security code

Jun 10th 2004
From The Economist print edition

Security technology: Tiny DNA fragments can function as invisible embedded security tags

IT HARDLY needs saying that the double helix of deoxyribonucleic acid—better known as DNA—is one of nature's most wondrous materials. Its twisting strands securely encode the genetic information on which all life depends. But Jun-Jei Sheu, a Taiwanese scientist, thinks DNA might be able to keep other things safe, too.

In the mid-1990s, he had the idea of using microscopic fragments of DNA, embedded like tiny bar-codes into everyday objects, as a security and anti-counterfeiting tool. The mathematical possibilities offered by DNA's long and apparently random sequences of four amino-acid “base pairs” mean that even the humble potato—one of Dr Sheu's initial sources for DNA sequences—offers a huge number of variations. “It's almost like God's own algorithm,” says Rob Hutchison, boss of Applied DNA Sciences, the Los Angeles-based biotech company that now markets Dr Sheu's technology outside Asia.

The main scientific obstacle was that “naked” DNA is actually quite delicate. Exposure to ultraviolet light, for example, can damage it within hours. By 2001, however, Dr Sheu had created a substance that can, he says, protect DNA for a century or more. The exact specifications of this “protective envelope” remain secret. But it means that fragments of plant-derived DNA, typically between 1m and 10m base-pairs long and specially manufactured for each application, can be added to almost anything.

It can, for example, be mixed into the ink or paper that is used to make passports or currency. It can be embedded into product labels, or sprayed on to cotton to mark its country of origin. DNA fragments can be embedded in the plastic containers used to hold pharmaceuticals or suspended in expensive fluids, such as perfumes, to prove they are the genuine article.

Secure DNA fragments can even be ingested safely, says Mr Hutchison. The manufacturer of a fancy rice-wine in Asia now mixes DNA fragments into its product and provides buyers with a simple detection kit that allows them to prove their bottle's legitimacy. In America, the approval process for ingestible DNA fragments is now under way. Once approved, they could be embedded both in the inks used on prescription bottles, and the pills inside, to confirm they are genuine.

All of this, of course, depends on being able to detect the presence of a DNA fragment reliably. The simplest technique involves a pen-like device that causes a colour change in ink that contains the DNA fragments. This test demonstrates that DNA fragments are present, but does not reveal anything about their particular genetic sequence. A more rigorous test uses a scanning device about the size of a suitcase. Using technology borrowed from the field of DNA fingerprinting, it can confirm that an embedded DNA fragment matches a reference fragment within ten minutes. A third, more complicated test done in a forensic laboratory can provide an even greater level of certainty for use in court proceedings.

Applied DNA Sciences has also devised a way to incorporate DNA fragments into the chips on smart cards. When the card is inserted into a reader, the chip checks that the fragments are present and undamaged, and if so returns an identification code. This approach can be used to make pass keys to secure areas that are almost impossible to duplicate, the company claims. The idea that DNA encodes your identity has, it seems, been given a new twist.

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RATIONAL CONSUMER

The meaning of iPod

Jun 10th 2004
From The Economist print edition

Consumer electronics: How Apple's iPod music-player and its imitators are changing the way music is consumed

WHAT is the meaning of iPod? When Apple, a computer-maker, launched its pocket-sized music-player in October 2001, there was no shortage of sceptical answers. Critics pointed to its high price—at $399, the iPod cost far more than rival music players—and to the difficulty Apple would have competing in the cut-throat consumer-electronics market. Worse, Apple launched the iPod in the depths of a technology slump. Internet discussion boards buzzed with jokes that its name stood for “idiots price our devices” or “I prefer old-fashioned discs.”

Such criticisms were quickly proven wrong. The iPod is now the most popular and fashionable digital music-player on the market, which Apple leads (see chart). Apple has been unable to meet demand for the latest model, the iPod mini. On the streets and underground trains of New York, San Francisco and London, iPod users (identifiable by the device's characteristic white headphone leads) are ubiquitous. Fashion houses make iPod cases; pop stars wear iPods in their videos. The iPod is a hit.

Its success depends on many factors, but the most important is its vast storage capacity. The first model contained a five gigabyte hard disk, capable of holding over 1,000 songs. The latest models, with 40 gigabyte drives, can hold 10,000. Before the iPod, most digital music players used flash-memory chips to store music, which limited their capacity to a few dozen songs at best. Apple correctly bet that many people would pay more for the far larger capacity of a hard disk. Apple's nifty iTunes software, and the launch of the iTunes Music Store, from which music can be downloaded for $0.99 per track, also boosted the iPod's fortunes.

It is easy to dismiss the iPod as a fad and its fanatical users as members of a gadget-obsessed cult. But the 3m or so iPod users worldwide are an informative minority, because hard-disk-based, iPod-like devices are the future of portable music. According to In-Stat/MDR, a market-research firm, iPods account for 22% of digital music-players overall, but 71% of hard-disk-based players (see chart), the fastest-growing segment: over the next five years their sales will grow by 45% a year, overtaking flash-based players during 2005. So what iPod users do today, the rest of us will do tomorrow. Their experience shows how digital music-players will transform the consumption of music.

Professor iPod speaks

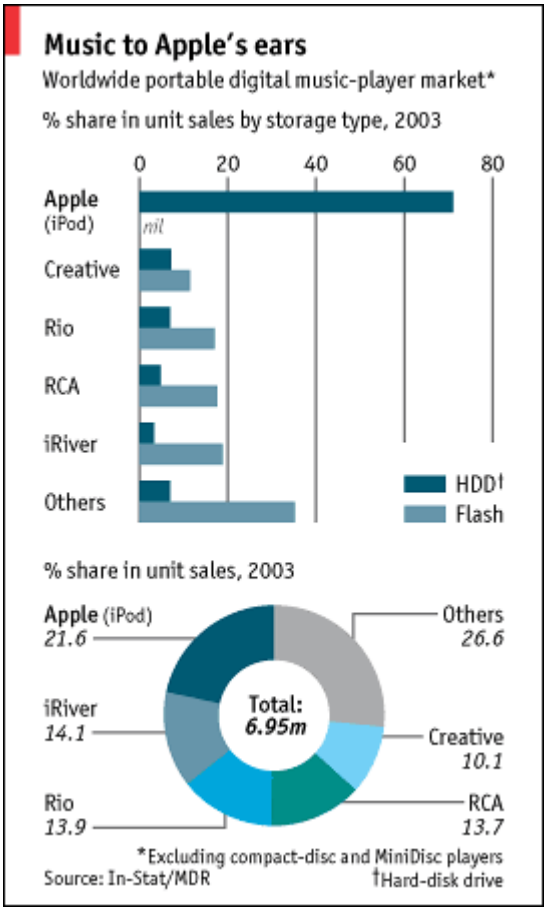
Few people know more about the behaviour of iPod users than Michael Bull, a specialist in the cultural impact of technology at the University of Sussex in England. Having previously studied the impact of the cassette-based Sony Walkman, he is now surveying hundreds of iPod users. Their consumption of music, he says, changes in three main ways.

The first and most important is that the iPod grants them far more control over how and where they listen to their music. Surely, you might ask, an iPod is no different from a cassette or

CD-based player, since you can always carry a few tapes or discs with you? But most people, says Dr Bull, find that if none of the music they are carrying with them fits their mood, they prefer not to listen to music at all. The large capacity of a hard-disk-based player does away with this problem. The right music can always be summoned up depending on your mood, the time of day, and your activity, says Dr Bull. As a result, iPod users tend to listen to particular music during specific journeys or activities, such as commuting to work or jogging.

By granting them control over their environment—the audible environment, at least—the iPod allows its users to escape into their own little private bubbles. When standing in line at the airport, or waiting for a late train, iPod users feel that not everything, at least, is out of their control. They are also, says Dr Bull, far more selective about answering their mobile phones. That suggests that adding phone functionality to the iPod would be a bad idea, since it would facilitate intrusion.

This does not mean the iPod is inherently anti-social, however. For its second effect is to make music consumption, a traditionally social activity, even more so. You can use your iPod as a jukebox at home, and the ability to carry your music collection with you means you can always play new tracks to your friends. Many iPod users compile special selections of tunes, or playlists, for family listening while in the car. Family members negotiate the contents of the playlist, so that Disney tunes end up juxtaposed with jazz and Justin Timberlake.



That leads to the third of the iPod's effects on music consumption. The ability to mix and match tracks in playlists unconstrained by the limitations of vinyl records or CDs could undermine the notion of the album as a coherent collection of music. Musicians can still make albums if they want to, of course. But with music sold online on a track-by-track basis, albums could suddenly look very old-fashioned, and singles might make a comeback.

Are video iPods next? Strikingly, none of these shifts in usage patterns applies to video. People do not watch movies while walking the dog, make playlists of their favourite movie scenes, or clamour to buy individual scenes online. Portable video-players, which are already starting to become available, undoubtedly have their uses, such as providing entertainment during long journeys. But they seem unlikely to be the kind of industry-changing products that the iPod and its imitators have unexpectedly proven to be.

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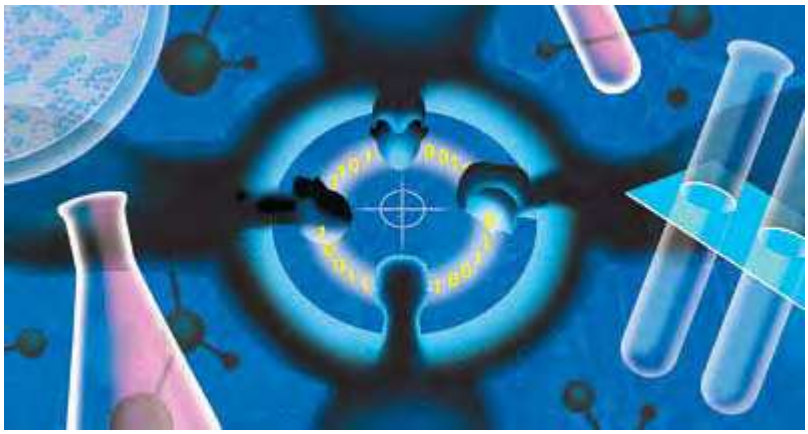
REPORTS

An open-source shot in the arm?

Jun 10th 2004
From The Economist print edition



Medicine: The open-source model is a good way to produce software, as the example of Linux shows. Could the same collaborative approach now revitalise medical research too?

CAN goodwill, aggregated over the internet, produce good medicine? The current approach to drug discovery works up to a point, but it is far from perfect. It is costly to develop medicines and get regulatory approval. The patent system can foreclose new uses or enhancements by outside researchers. And there has to be a consumer willing (or able) to pay for the resulting drugs, in order to justify the cost of drug development. Pharmaceutical companies have little incentive to develop treatments for diseases that particularly afflict the poor, for example, since the people who need such treatments most may not be able to afford them.

It is in this environment that a number of medical biologists, lawyers, entrepreneurs and health-care activists have sought improvements. They have suggested borrowing the “open-source” approach that has proven so successful in another area of technology, namely software development. This is a decentralised form of production in which the underlying programming instructions, or “source code”, for a given piece of software are made freely available. Anyone can look at it, modify it, or improve it, provided they agree to share their modifications under the same terms. Volunteers collaborating in this way over the internet have produced some impressive software: the best-known example is the Linux operating system. So why not apply the open-source model to drug development too?

Source for the goose

In fact, open-source approaches have emerged in biotechnology already. The international effort to sequence the human genome, for instance, resembled an open-source initiative. It placed all the resulting data into the public domain rather than allow any participant to patent any of the results. Open source is also flourishing in bioinformatics, the field in which biology meets information technology. This involves performing biological research using supercomputers rather than test-tubes. Within the bioinformatics community, software code and databases are often swapped on “you share, I share” terms, for the greater good of all. Evidently the open-source approach works in biological-research tools and pre-competitive platform technologies. The question now is whether it will work further downstream, closer to the patient, where the development costs are greater and the potential benefits more direct.

Open-source research could indeed, it seems, open up two areas in particular. The first is that of non-patentable compounds and drugs whose patents have expired. These receive very little attention from researchers, because there would be no way to protect (and so profit from) any discovery that was made

about their effectiveness. To give an oft-quoted example, if aspirin cured cancer, no company would bother to do the trials to prove it, or go through the rigmarole of regulatory approval, since it could not patent the discovery. (In fact, it might be possible to apply for a process patent that covers a new method of treatment, but the broader point still stands.) Lots of potentially useful drugs could be sitting under researchers' noses.

The second area where open source might be able to help would be in developing treatments for diseases that afflict small numbers of people, such as Parkinson's disease, or are found mainly in poor countries, such as malaria. In such cases, there simply is not a large enough market of paying customers to justify the enormous expense of developing a new drug. America's Orphan Drug Act, which provides financial incentives to develop drugs for small numbers of patients, is one approach. But there is still plenty of room for improvement—which is where the open-source approach might have a valuable role to play.

In a paper presented this week in San Francisco at BIO 2004, the Biotechnology Industry Organisation's annual conference, Stephen Maurer, Arti Rai and Andrej Sali—two lawyers and a computational biologist, respectively—called for an open-source approach to invent drugs to fight tropical diseases. It would work like this: a website they call the Tropical Disease Initiative would allow biologists and chemists to volunteer their expertise on certain areas of a specific disease. They would examine and annotate shared databases, and perform experiments. The results would be fully transparent and discussed in chat rooms. The authors expect that the research, at least initially, would be mainly computational, not carried out in “wet” laboratories.

The difference between this proposal and earlier open-source approaches in biomedical research is that where before scientists swapped software, here they would collaborate on the data. And where projects such as the mapping of the human genome relied on massive top-down government involvement, this proposal would, like an open-source software project, be the result of bottom-up self-organisation among researchers themselves. That said, the authors acknowledge that a government or grant-giving charity would probably have to provide the initial funds.

“We are so used to patents that we forgot ways to discover drugs in the public domain, and we need to rediscover them”

Moreover, the results of the research would not be made available under an open-source licence of the kind that governs software projects. Instead, the final development of drug candidates would be awarded to a laboratory based on competitive bids. The drug itself would go in the public domain, for generic manufacturers to produce. This, the authors state, would achieve the goal of getting new medicines to those who need them, at the lowest possible price. “We are so used to patents that we forgot ways to discover drugs in the public domain, and we need to rediscover them,” says Mr Maurer, of the Goldman School of Public Policy at the University of California in Berkeley.

This is just one of many attempts to extend elements of the open-source software-development model to drug research. Yochai Benkler, a law professor at Yale, imagines test-tube and animal studies organised in this manner, exploiting the “excess capacity” of graduate students and university labs, much as students and academics also contribute to open-source software development.

Trial and error

Eric von Hippel, a professor at the Massachusetts Institute of Technology's Sloan School of Management, is investigating how secondary uses for drugs are discovered, with a view to harnessing doctors and patients to record data. Many medications are approved for one purpose, but are regularly prescribed for another, “off-label” use. In many instances, new uses for a drug are discovered only after it is on the market, when a sort of natural experimentation takes place. For instance, Botox was approved in America for treating eye-muscle disorders, and only later found to remove wrinkles. In Europe and America, as many as half of all drug prescriptions for certain diseases fall into this category. The drugs often do not go through the formal process for other uses because the cost of regulatory approval is so high.

This is a problem for a number of reasons. First, it means that drug companies are prohibited from advertising the medications based on these additional uses, so some patients may not get the treatment that would benefit them. Next, insurance companies in America usually only cover on-label use. And the effectiveness of the treatment is not formally evaluated. Dr von Hippel's idea is to decentralise the process of obtaining data on the off-label use, by collaborating with volunteer doctors and patients. By

defraying costs in this way, it might then be possible to obtain regulatory approval. It is, in effect, an open-source clinical trial. Because the drug has already been approved, it has passed first-phase tests for safety. These do not have to be repeated. Second and third-phase drug-approvals test for efficacy and side-effects—and these are the very areas where getting formal approval for off-label use is sensible.

Meanwhile, not far from Dr von Hippel at MIT, thousands of fruit flies are being decapitated. Peter Lansbury, the head of a research lab at Harvard Medical School, avows that they are treated with chloroform, so “they don't feel a thing”. The fruit flies have Parkinson's disease, and Dr Lansbury's research is examining the therapeutic effect of a thousand approved drugs, on which the patent has expired in most cases. Might one of them turn out to be an effective treatment?

This sort of research is unusual because there is no working hypothesis to prove and no way to profit if the project is successful. It has simply never been studied before, and should be, says Dr Lansbury, who is the co-founder of the Laboratory for Drug Discovery in Neurodegeneration. The laboratory has around 25 researchers and an annual budget of $2.5m to work on neurodegenerative diseases, such as Parkinson's or Huntington's, to which the major commercial drug companies devote few resources because their potential market is small.

Dr Lansbury refers to the work as “not-for-profit drug discovery”, but he sees direct parallels with the open-source approach. For one thing, his group places much of its data in the public domain. Secondly, though the research is mainly happening among different research labs within the confines of Harvard at the moment, the goal is to involve other scientists around the world. Only through this sort of collaborative, distributed approach will treatments be found for these diseases, he says. As for the intellectual property that may be created, the goal is to use patents only to license treatments cheaply to pharmaceutical companies to ensure a supply of drugs at low cost. But the most important thing is to discover the drugs in the first place—something commercial drug-development seems unable to do.

There are a number of other similarities between biomedical research and open-source software development. First, both fields attract the same sort of people. Biology, like software, relies on teams of volunteers, notably graduate students and young professionals, who have an incentive to get involved because it will enhance their professional reputations or establish expertise. Both medical biologists and computer scientists aim to improve people's lives and make the world a better place. And as the human-genome project showed, both cultures respond strongly to grand projects, not just financial incentives—possibly because they are generally highly paid to begin with.

“What does it mean to apply the term ‘open source' in fields outside software development, which do not use ‘source code' as a term of art?”

That said, the dissimilarities are profound. The financial needs and time to complete projects are wildly different. A new piece of software can be thrown together in days or weeks, and rarely more than a few months. The barriers to entry are low: many pieces of software begin life in an enthusiast's bedroom or garage. Pharmaceutical research, in contrast, is measured in years, fails more often than it succeeds, and requires hard-core credentials and in many cases expensive equipment, not just hard work.

Moreover, the computational portion of the drug-discovery process—typified as upstream, far from the patient, at the early-stage level, where profits are thinner—is not the costly bit. Rather, it is the less computer-intensive things such as toiling in wet laboratories, performing clinical trials and navigating the regulatory-approval process where one finds the bulk of the cost of bringing a drug to market. The closer to the patient one goes, the tougher it is to imagine open-source processes making a significant impact.

The application of the open-source approach to drug development may prove to be more useful as an analogy than an application, notes Janet Hope, a lawyer completing a doctorate on “open-source biotechnology” at the Australian National University, in Canberra. One reason is that different intellectual property rights apply, and are protected differently. Software usually falls under copyright, which arises automatically and without cost to the author. Biomedical discoveries are generally protected by an entirely different legal regime, patents, which are costly to obtain.

This helps explain why the drug-discovery and development projects place their work in the public domain, rather than trying to enforce some form of reciprocal openness through an open-source licensing agreement, as software does. Those involved in the human-genome project investigated the possibility in 2000 of applying an open-source licensing agreement to the results, but decided that simply throwing the results into the public domain—without any restriction on their use—was better. Its successor project, the International HapMap Project, which is mapping the common patterns of variation within the

genome, imposes an open-source licence for research in progress. But it places the completed data in the public domain and allows patents on subsequent discoveries.

This suggests that continued reciprocal sharing, a key part of open-source software development, may not have a meaningful equivalent on the biological side of the fence. With open-source drug discovery in the public domain, where there is no legal obligation to share one's inventions, there is no guarantee that philanthropic sentiments will override self-interest. Participants can always choose to send their results to the patent office rather than the communal web site. While the open-source approach shows much promise in drug discovery, it is certainly no panacea.

Back to the source

More broadly, two big questions remain unanswered as the open-source approach starts to colonise disciplines beyond its home ground of software development. The first is whether open-source methods can genuinely foster innovation. In software, all that has been developed are functional equivalents of proprietary software—operating systems, databases, and so on—that are sometimes slightly better and sometimes glaringly worse than their proprietary counterparts. Their main distinction, from users' point of view, is simply that they are available free of charge. Curiously, this matches the complaint levelled against pharmaceutical companies for developing “me-too” drugs to compete with other firms' most successful product lines—witness the current crop of Viagra imitators—rather than spending their research money in an entirely new area.

The second question is semantic. What does it mean to apply the term “open source” in fields outside software development, which do not use “source code” as a term of art? Depending on the field in question, the analogy with source code may not always be appropriate. It seems the time has come to devise a new, broader term than “open source”, to refer to distributed, internet-based collaboration. Mr Benkler calls it non-proprietary peer-production of information-embedding goods. Surely someone, somewhere can propose something snappier.

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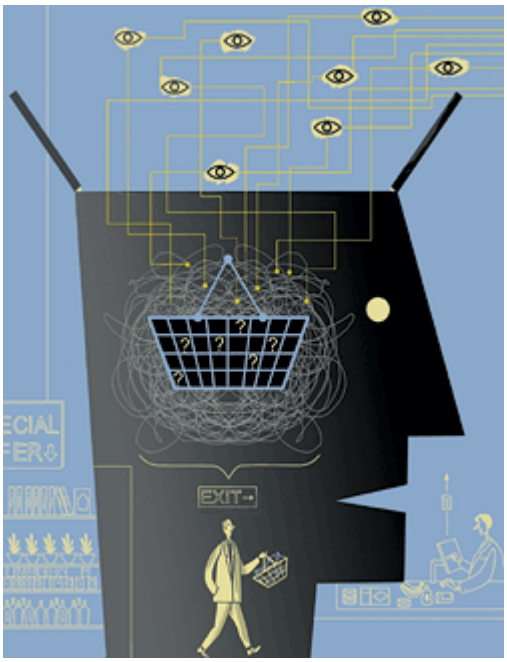
REPORTS

A golden vein

Jun 10th 2004
From The Economist print edition



Computing: Analysis of customer information, better known as “data mining”, is finally delivering on its promises—and expanding into some promising new areas

IN THE old days, knowing your customers was part and parcel of running a business, a natural consequence of living and working in a community. But for today's big firms, it is much more difficult: a big retailer such as Wal-Mart has no chance of knowing every single one of its customers. So the idea of gathering huge amounts of information and analysing it to pick out trends indicative of customers' wants and needs—data mining—has long been trumpeted as a way to return to the intimacy of a small-town general store.

But for many years, data mining's claims were greatly exaggerated. Customer-loyalty cards, which allow retailers to gather information not just about what is selling, but who is buying it, sound like a great idea. Yet Safeway, a British retailer, eliminated its customer-loyalty card when it realised it was gathering mountains of data without being able to use it. Then there was the famous story that Wal-Mart had discovered that sales of nappies (diapers) and beer were highly correlated, as young fathers dropped in at its stores on their way home from work to pick up supplies of the former, and decided to stock up on the latter at the same time. Wal-Mart, the story goes, then put the two items side-by-side on its shelves, and sales rocketed. Alas, the whole story is a myth, an illustration of data mining's hypothetical possibilities, not the reality.

In recent years, however, improvements in both hardware and software, and the rise of the world wide web, have enabled data mining to start delivering on its promises. Richard Neale of Business Objects, a software company based in San Jose, California, tells the story of a British supermarket that was about to discontinue a line of expensive French cheeses which were not selling well. But data mining showed that the few people who were buying the cheeses were among the supermarket's most profitable customers—so it was worth keeping the cheeses to retain their custom.

As data mining has matured, examples like this are plentiful. The field is now advancing on three new fronts. The first is the ability to mine data in real time, and use the results to adjust pricing on the fly, for

example. The second is the vogue for “predictive analytics”, the art of using historical data not just to explain past trends, but to predict future ones. Finally, there is growing interest in systems that can analyse messy “unstructured” data, such as text on the web, rather than just structured data stored in orderly databases.

From mining to intelligence

The traditional British pub seems like an unlikely place to find the latest in data mining. But some pub chains now change the prices of different drinks from day to day, using software that assesses the impact that “happy hour” offers have on sales. If discounting a particular beer boosts sales one day, it is likely to remain discounted the next—and if not, something else will be tried. As well as being much faster than traditional data mining, this kind of thing requires many other elements to be in place, such as the capacity to track inventory accurately and re-price products dynamically. So the term “data mining” is being displaced by “business intelligence” (BI), which comprises the other necessary elements as well.

Mike Rote, head of data mining at Teradata, a firm based in Dayton, Ohio, says a key element in making real-time analysis possible is that “data warehouses” are now integrated with the analytic software. In the past, the data lived in databases that were good at handling day-to-day transactions, but not so good at analysis. Preparing the data for analysis was a slow and laborious process. Another thing that has helped, says Mr Rote, is parallelism, where different processors within a large computer can tackle different chunks of data. This speeds things up and allows very large data sets to be analysed. For example, a large telecoms firm with a record of all telephone calls made by each customer may wish to monitor local and international calling patterns from day to day. This requires the rapid aggregation of a mountain of data that may take up many terabytes (millions of megabytes, or trillions of bytes)—just the sort of thing modern BI systems can do.

“As the cost of storage plummets and the power of analytic tools improves, there is little likelihood that enthusiasm for data mining will diminish”

For consumers, perhaps the most visible application of real-time analytics is in fraud analysis and prediction. After all, it is no use discovering that a credit-card transaction made six months ago was fraudulent. Spotting fraud therefore means performing analysis of transactions as they happen. Such systems are becoming increasingly sophisticated which, paradoxically, makes them less visible. Robert Littas, vice-president for fraud management at the European arm of Visa, says that a new system called VISOR, implemented in January across all European banks that issue Visa credit cards, has reduced fraud from 1,576 cases per month across seven test banks to 458 cases. Better still, it has a far lower “false alarm” rate, generating an average of ten false alarms for each fraudulent transaction, compared with 97 for its predecessor.

Predict and provide

The next step, making useful predictions from real-time data, is some way off, though many BI vendors claim to be able to do it already. A recent report from Forrester, a consultancy, cited the example of a car-insurance firm. It found that while sports-car drivers have more accidents, and should therefore pay higher premiums, people whose second car is a sports car are no more accident-prone than drivers of ordinary cars. The predictive analytic model then suggested lowering premiums for these individuals, which the company did, gaining market share.

However, the line between predictive analytics on one hand and the traditional analysis of recent data to determine future strategy on the other is not at all clear. For is the discovery that sales of, say, beer and nappies are correlated not an implicit prediction that putting them side by side on the shelves will increase sales? While BI vendors like to talk about predictive analytics, many of their customers regard such talk as premature. Despite the hype, most examples appear simply to be more sophisticated versions of old-fashioned data-mining techniques, at least for now.

A more promising trend is the adaptation of data-mining techniques to unstructured data. A database, no matter how large, is structured in an orderly way, and can be sliced and diced accordingly. The same cannot be said of terabytes of ordinary human language. Natural-language processing (NLP), the ultimate goal of which is to enable computers to make sense of human languages, is an ambitious project with a very long way to go. Nonetheless, limited implementations of NLP, combining two complementary approaches, are already on their way to the marketplace. Rules along the lines of “when X follows ‘in',

and is capitalised, it is likely to be a geographical location," are one part. The other is statistical processing, which compares the frequencies of words and phrases in different texts to determine if they are related.

Perhaps the most notable example is IBM's WebFountain, a product of the company's Almaden research facility in California, which uses such technologies to analyse the entire web—256 terabytes' worth. In February, IBM announced a partnership with Semagix, a software firm, to target money laundering. The idea is to cross-correlate a structured list of people indicted for money laundering with unstructured information on the web. If a suspicious transaction crops up and the web-analysis finds a relationship between the person attempting it and someone on the list, then a red flag goes up. Dan Gruhl, the architect of WebFountain at IBM, emphasises that human intervention is necessary before taking any action, but the system, he says, can do the "heavy lifting" of sifting through the web.

Numerous start-ups are also working in the area of text analytics, as the field is called. Randy Clark of ClearForest, one such start-up based in New York, points out that one of the most effective current areas for text analytics lies in semi-structured data, such as the notes taken by operators in call centres. Though the name of the customer may be present in a separate, structured field, the nature of his or her complaint is usually entered in unstructured prose in a different field. Analysing this text can help a manufacturer identify a product that is going wrong in a particular way and enable them to fix it. The bits of text in question are generally short and straightforward, and the topic is well defined, so NLP software has a good chance of interpreting it correctly.

Another start-up, Fast Search & Transfer (Fast), based in Norway, touts a more easily understood benefit of its software: that it is fast. Bjorn Olstad, the firm's chief technologist, says Fast's software can handle 200 queries per second, through the use of parallelism. Reuters is using Fast's software to search for intellectual-property violations on the web. The software continually searches for snippets of text that resemble articles published on Reuters' newswire, and flags suspect instances for lawyers to check.

You talking to me?

Privacy advocates have long been wary of data mining, demonising supermarket loyalty cards, for example, as "spies in your shopping". Like any technology, of course, it can be misused. But in some cases, companies have realised that the information they hold about their customers can be a selling point, rather than a source of worry. Rob Carter, the chief information officer of Federal Express, an international delivery firm, points out that in many cases, FedEx knows more about customers' shipping habits than they do themselves. Similarly, itemised phone bills let people monitor their spending more easily.

As the cost of storing data plummets and the power of analytic tools improves, there is little likelihood that enthusiasm for data mining, in all its forms, will diminish. Forrester predicts that sales of BI software, currently around $2 billion a year, will grow by 8.5% a year over the next three years. If new tricks like predictive analytics and unstructured-data analysis catch on, that could prove to be a conservative figure. It will just be a matter of getting the data to find out.

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CASE HISTORY

A brief history of Wi-Fi

Jun 10th 2004
From The Economist print edition

Wireless networking: Few people have a kind word to say about telecoms regulators. But the success of Wi-Fi shows what can be achieved when regulators and technologists work together

IT STANDS as perhaps the signal success of the computer industry in the last few years, a rare bright spot in a bubble-battered market: Wi-Fi, the short-range wireless broadband technology. Among geeks, it has inspired a mania unseen since the days of the internet boom. Tens of millions of Wi-Fi devices will be sold this year, including the majority of laptop computers. Analysts predict that 100m people will be using Wi-Fi by 2006. Homes, offices, colleges and schools around the world have installed Wi-Fi equipment to blanket their premises with wireless access to the internet. Wi-Fi access is available in a growing number of coffee-shops, airports and hotels too. Yet merely five years ago wireless networking was a niche technology. How did Wi-Fi get started, and become so successful, in the depths of a downturn?

Wi-Fi seems even more remarkable when you look at its provenance: it was, in effect, spawned by an American government agency from an area of radio spectrum widely referred to as “the garbage bands”. Technology entrepreneurs generally prefer governments to stay out of their way: funding basic research, perhaps, and then buying finished products when they emerge on the market. But in the case of Wi-Fi, the government seems actively to have guided innovation. “Wi-Fi is a creature of regulation, created more by lawyers than by engineers,” asserts Mitchell Lazarus, an expert in telecoms regulation at Fletcher, Heald & Hildreth, a law firm based in Arlington, Virginia. As a lawyer, Mr Lazarus might be expected to say that. But he was also educated as an electrical engineer—and besides, the facts seem to bear him out.

In the beginning

Wi-Fi would certainly not exist without a decision taken in 1985 by the Federal Communications Commission (FCC), America's telecoms regulator, to open several bands of wireless spectrum, allowing them to be used without the need for a government licence. This was an unheard-of move at the time; other than the ham-radio channels, there was very little unlicensed spectrum. But the FCC, prompted by a visionary engineer on its staff, Michael Marcus, took three chunks of spectrum from the industrial, scientific and medical bands and opened them up to communications entrepreneurs.

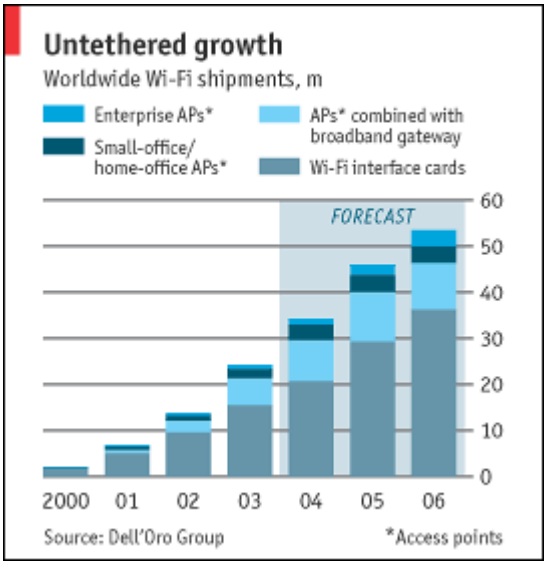
These so-called “garbage bands”, at 900MHz, 2.4GHz and 5.8GHz, were already allocated to equipment that used radio-frequency energy for purposes other than communications: microwave ovens, for example, which use radio waves to heat food. The FCC made them available for communications purposes as well, on the condition that any devices using these bands would have to steer around interference from other equipment. They would do so using “spread spectrum” technology, originally developed for military use, which spreads a radio signal out over a wide range of frequencies, in contrast to the usual approach of transmitting on a single, well-defined frequency. This makes the signal both difficult to intercept and less susceptible to interference.

Though the 1985 ruling seems visionary in hindsight, nothing much happened at the time. What ultimately got Wi-Fi moving was the creation of an industry-wide standard. Initially, vendors of wireless equipment for local-area networks (LANs), such as Proxim and Symbol, developed their own kinds of proprietary equipment that operated in the unlicensed bands: equipment from one vendor could not talk to equipment from another. Inspired by the success of Ethernet, a wireline-networking standard, several vendors realised that a common wireless standard made sense too. Buyers would be more likely to adopt the technology if they were not “locked in” to a particular vendor's products.

In 1988, NCR Corporation, which wanted to use the unlicensed spectrum to hook up wireless cash registers, asked Victor Hayes, one of its engineers, to look into getting a standard started. Mr Hayes, along with Bruce Tuch of Bell Labs, approached the Institute of Electrical and Electronics Engineers (IEEE), where a committee called 802.3 had defined the Ethernet standard. A new committee called 802.11 was set up, with Mr Hayes as chairman, and the negotiations began.

The fragmented market meant it took a long time for the various vendors to agree on definitions and draw up a standard acceptable to 75% of the committee members. Finally, in 1997, the committee agreed on a basic specification. It allowed for a data-transfer rate of two megabits per second, using either of two spread-spectrum technologies, frequency hopping or direct-sequence transmission. (The first avoids interference from other signals by jumping between radio frequencies; the second spreads the signal out over a wide band of frequencies.)

The new standard was published in 1997, and engineers immediately began working on prototype equipment to comply with it. Two variants, called 802.11b (which operates in the 2.4GHz band) and 802.11a (which operates in the 5.8GHz band), were ratified in December 1999 and January 2000 respectively. 802.11b was developed primarily by Richard van Nee of Lucent and Mark Webster of Intersil (then Harris Semiconductor).



Companies began building 802.11b-compatible devices. But the specification was so long and complex—it filled 400 pages—that compatibility problems persisted. So in August 1999, six companies—Intersil, 3Com, Nokia, Aironet (since purchased by Cisco), Symbol and Lucent (which has since spun off its components division to form Agere Systems)—got together to create the Wireless Ethernet Compatibility Alliance (WECA).

A rose by any other name...

The idea was that this body would certify that products from different vendors were truly compatible with each other. But the terms “WECA compatible” or “IEEE802.11b compliant” hardly tripped off the tongue. The new technology needed a consumer-friendly name. Branding consultants suggested a number of names, including “FlankSpeed” and “DragonFly”. But the clear winner was “Wi-Fi”. It sounded a bit like hi-fi, and consumers were used to the idea that a CD player from one company would work with an amplifier from another. So Wi-Fi it was. (The idea that this stood for “wireless fidelity” was dreamed up later.)

The technology had been standardised; it had a name; now Wi-Fi needed a market champion, and it found one in Apple, a computer-maker renowned for innovation. The company told Lucent that, if it could make an adapter for under $100, Apple would incorporate a Wi-Fi slot into all its laptops. Lucent delivered, and in July 1999 Apple introduced Wi-Fi as an option on its new iBook

“Wi-Fi's ultimate significance may be that it provides a glimpse of what

computers, under the brand name AirPort. “And that completely changed the map for wireless networking,” says Greg Raleigh of Airgo, a wireless start-up based in Palo Alto, California. Other computer-makers quickly followed suit. Wi-Fi caught on with consumers just as corporate technology spending dried up in 2001.

will be possible with future wireless technologies”

Wi-Fi was boosted by the growing popularity of high-speed broadband internet connections in the home; it is the easiest way to enable several computers to share a broadband link. To this day, Wi-Fi's main use is in home networking. As the technology spread, fee-based access points known as “hotspots” also began to spring up in public places such as coffee-shops, though many hotspot operators have gone bust and the commercial viability of many hotspots is unclear. Meanwhile, the FCC again tweaked its rules to allow for a new variant of Wi-Fi technology, known as 802.11g. It uses a new, more advanced form of spread-spectrum technology called orthogonal frequency-division multiplexing (OFDM) and can achieve speeds of up to 54 megabits per second in the 2.4GHz band.

Where next? Many Wi-Fi enthusiasts believe it will sweep other wireless technologies aside: that hotspots will, for example, undermine the prospects for third-generation (3G) mobile-telephone networks, which are also intended to deliver high-speed data to users on the move. But such speculation is overblown. Wi-Fi is a short-range technology that will never be able to provide the blanket coverage of a mobile network. Worse, subscribe to one network of hotspots (in coffee-shops, say) and you may not be able to use the hotspot in the airport. Ken Denman, the boss of iPass, an internet-access provider based in Redwood Shores, California, insists that things are improving. Roaming and billing agreements will, he says, be sorted out within a couple of years.

By that time, however, the first networks based on a new technology, technically known as 802.16 but named WiMax, should be up and running. As its name suggests, WiMax is positioned as a wide-area version of Wi-Fi. It has a maximum throughput of 70 megabits per second, and a maximum range of 50km, compared with 50m or so for Wi-Fi. Where Wi-Fi offers access in selected places, like phone boxes once did, WiMax could offer blanket coverage, like mobile phones do.

Wi-Fi is also under threat in the home. At the moment it is the dominant home-networking technology: Wi-Fi-capable televisions, CD players and video-recorders and other consumer-electronics devices are already starting to appear. This will make it possible to pipe music, say, around the house without laying any cables. Cordless phones based on Wi-Fi are also in the works. But Wi-Fi may not turn out to be the long-term winner in these applications. It is currently too power-hungry for handheld devices, and even 802.11g cannot reliably support more than one stream of video. And a new standard, technically known as 802.15.3 and named WiMedia, has been specifically designed as a short-range, high-capacity home networking standard for entertainment devices.

Wi-Fi's ultimate significance, then, may be that it provides a glimpse of what will be possible with future wireless technologies. It has also changed the way regulators and technologists think about spectrum policy. The FCC has just proposed that broadcast “whitespace”—the airwaves assigned to television broadcasters but not used for technical reasons—should be opened up too. That is not to say that spectrum licensing will be junked in favour of a complete free-for-all over the airwaves. Julius Knapp, the deputy chief of the office of engineering and technology at the FCC, maintains that both the licensed and unlicensed approaches have merit.

Wi-Fi also shows that agreeing on a common standard can create a market. Its example has been taken to heart by the backers of WiMax. Long-range wireless networking gear, like short-range technology before it, has long been dominated by vendors pushing proprietary standards, none of which has been widely adopted. Inspired by Wi-Fi's success, the vendors have now thrown their weight behind WiMax, a common standard with a consumer-friendly name, which they hope will expand the market and boost all their fortunes. Whatever happens to Wi-Fi in future, it has blazed a trail for other technologies to follow.

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TRANSPORT

The road tolls for thee

Jun 10th 2004
From The Economist print edition

AP

Transport: As road tolls become ever more widespread, the technology used to collect them is becoming increasingly complex—and could ultimately shape the future of motoring

FOR Milo, a kid with plenty of time, life is a bore. Then one day, a tollbooth mysteriously appears in his room. Driving through it in his toy car, he enters a strange world where surprises lurk behind every corner. This is the plot of Norton Juster's classic children's book, “The Phantom Tollbooth”. Many drivers may soon be in a similar situation: electronic tollbooths will appear in their lives and change them in unexpected ways.

Elaborate new toll systems are popping up all over the world. And it is no longer just highways, bridges or tunnels that get tolled, but entire city centres or national road networks. In 2003, London became the second big city after Singapore to make drivers pay to enter the city centre, an example closely watched in many other parts of the world. In 2001 and 2004 respectively, Switzerland and Austria began charging trucks; Germany and Britain will follow in 2005 and 2008. Eventually such nationwide toll systems will almost certainly be extended to cars.

Toll roads are nothing new, of course. But the recent growth of road tolling has occurred because governments now face a double problem, says Jack Opiola of Hyder Consulting, a tolling expert who is currently helping the British, Australian and New Zealand governments to design schemes for trucks. First, the fiscal fountain of revenues from petrol taxes has begun to dry up: although there are ever more cars driving ever more miles, tax revenues have not held up because of ever more efficient vehicles—a trend likely to continue as electric and hybrid cars become more widespread.

This is bad news for finance ministers, but their colleagues in transport departments are also feeling the heat. Building more roads is becoming more difficult and more expensive, due to environmental concerns and the increasing prices of land, materials and labour. So governments have no choice but to start managing demand more directly.

The taxman on your dashboard

That means tolls. Indeed, directly charging for road usage seems to be just what the doctor ordered. Tolls force today's users, not future generations, to pay for transport infrastructure. They also promise to be a steadier revenue stream to supplement and even, one day, replace the petrol tax (and in some countries, such as Britain and Germany, the vehicle-excise tax). At the same time, they have the potential to be an equitable and efficient way of managing traffic. All this, however, requires cheap and

proven technology. Fortunately for governments, both criteria are slowly being met, thus removing the main drawback of traditional toll roads: the high cost of building and operating them.

A traditional toll plaza for a two-lane highway has a price tag of up to $30m: it requires tollbooths, an administrative building and a widening of the highway. Nearly a third of the installation's revenues are spent on operating costs, mainly in the form of salaries for toll collectors. By comparison, a state-of-the-art electronic toll plaza that is able to handle the same number of cars costs only about $150,000 to build and consumes only a tenth of toll revenues in running costs.

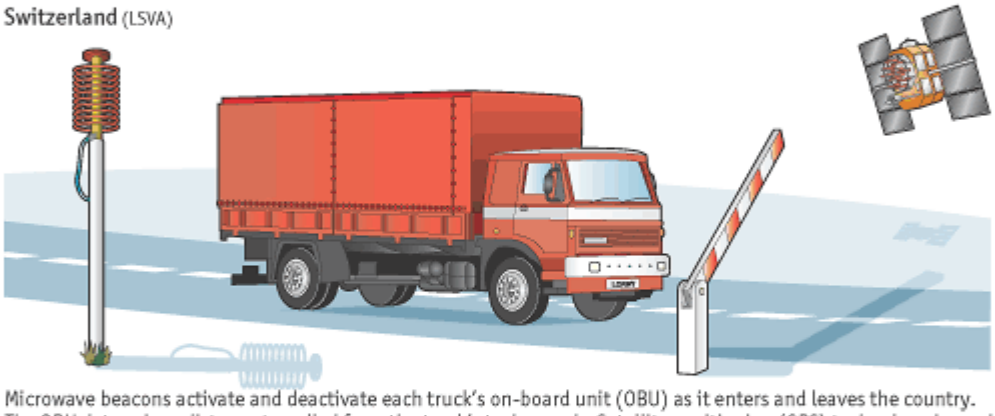
Key to the new tolling systems are two technologies that make it much cheaper to determine whether a vehicle is in a charging zone. The first is Designated Short Range Communication (DSRC), which relies on microwave or, less frequently, infra-red signals. It is used in devices—such as the E-ZPass tags found in many cars—that let vehicles go through a toll plaza without stopping. The battery-powered tag is activated by microwave and sends back a code identifying the vehicle. The second technology is the satellite-based Global Positioning System (GPS), which can determine a vehicle's position to within a few metres.

How electronic road-tolling works

London (Congestion charge)

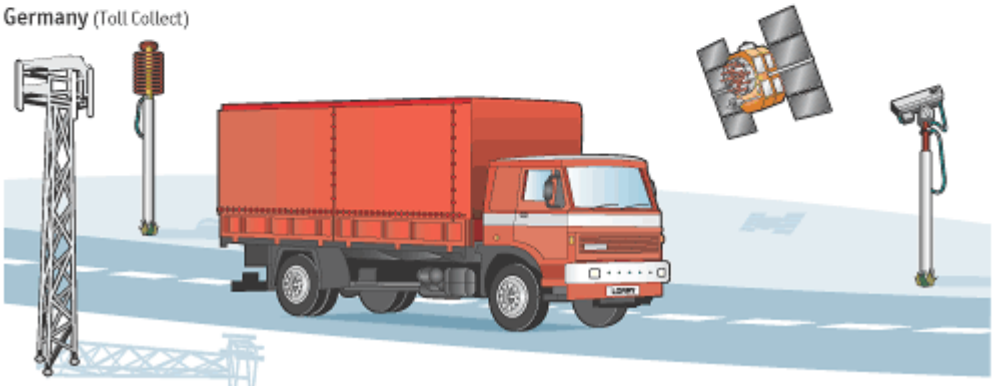
Roadside cameras record the number plate of every vehicle within the "congestion charge" zone. Drivers pay the £5 daily charge by phone or over the internet. Non-payers are issued with fines by post.

Switzerland (LSVA)



Microwave beacons activate and deactivate each truck's on-board unit (OBU) as it enters and leaves the country. The OBU determines distance travelled from the truck's tachograph. Satellite positioning (GPS) technology is used to verify the tachograph results. Both tachograph and GPS readings are stored on a smart card. The smart card is sent to the customs authority, which issues a bill.

Germany (Toll Collect)



Readings from microwave beacons, GPS, the tacograph and an on-board gyroscope are combined by the OBU to determine the truck's position. The OBU calculates the toll and informs a central data-centre via the mobile-phone network, so a bill can be issued. Roadside cameras ensure that all trucks are registered with the system.

These technologies can now be more easily integrated with cameras, mobile-phone networks and other devices. The most visible expression of this is the On-Board Unit, or OBU—an electronic jack-of-all-trades usually installed on a truck's dashboard. Depending on the model, it can do everything from interpreting GPS and DSRC signals to reading electronic maps and transferring data to and from smart cards. Previously unconnected systems can also be linked up in the background using software. In London, drivers can register on the web to pay the “congestion charge” for driving in the city centre by text message. The funds can then be automatically deducted from the appropriate account when a payment message is received. The ability to link the web, mobile phones and the banking system together in this way makes the whole system much more efficient.

Under the bonnet

How tolling systems are built depends partially on how a country's engineers see the world: some think a short-range approach based on DSRC is the way to go, while others bet on the global reach of GPS. But more importantly, it is the national context that determines the design of a system. Is it supposed to charge for access to a city centre (as in London), all roads (Switzerland) or just the highway network (Germany)? And is industrial policy an issue?

London's congestion-charging system was built quickly in 2002 because it was a campaign promise by Ken Livingstone, the city's newly elected mayor. As a result, the city's transport agency opted for “proven technology”, as Jeremy Evans, its head of traffic management, puts it. Drivers pay the daily charge of £5 ($9) through various channels such as shops, the internet and by phone. Enforcement is handled by nearly 700 video cameras within the charging zone, which capture images of number plates. Each is connected, via a fibre-optic link, to a data centre in which the images are recognised and checked against a database of those vehicles that have paid or are exempt. Anyone who fails to pay is issued with a fine by post.

“Tolls force today's users, not future generations, to pay for infrastructure, and could be a more equitable and efficient way to manage traffic”

The Swiss scheme, called the “distance-based heavy vehicles fee” (LSVA) is more complex, not least because it would be difficult to plaster all of Switzerland with video cameras. But the system, which currently charges transport companies between €0.11 ($0.13) and €0.45 per kilometre, does not incorporate the most advanced technology either. A basic approach is good enough, since the task at hand is to charge for the distance driven regardless of the type of road taken (which is what the Swiss government chose to do, so that trucks would not switch from highways to byways). So while GPS is used, its accuracy is not relied upon for the system to work.

When a truck enters Switzerland, a signal from a DSRC beacon at the border station tells the OBU to start recording the distance travelled, using data from the tachograph, checked using GPS. Using GPS merely as an auditing tool is no problem, because the OBU only has to determine its position every now and then. Tachograph and GPS data are saved on a smart card, which is then sent to the customs authority or its content downloaded online. Enforcement is done using more DSRC beacons at the roadside, and also visually. Coloured lights on the OBU tell police whether a truck is legal.

The German scheme will be the most advanced—if Toll Collect, the firm that is developing and operating the system on behalf of the German government, ever gets it to work properly. It is much more complex than the others because it is meant to be more than just a system to collect tolls: it is seen as a platform for services such as fleet management, traffic alerts and navigation. Industrial policy was the main reason for embarking on this rather risky path. The German government wanted to help DaimlerChrysler and Deutsche Telekom, the national automobile and telecoms giants that are Toll Collect's main shareholders, to develop exportable technology.

This ambitious approach determined much of the system's architecture. Toll Collect's on-board units use GPS to determine a truck's position. To compensate for the technology's weaknesses—it can only determine the truck's position to within a few metres—the device compares the GPS data with information from the tachograph and a built-in gyroscope. And in zones where toll-free roads run parallel to the autobahn, which could confuse matters, microwave beacons send out additional positioning information. The OBU is also stuffed with intelligence and electronic maps so it can calculate what tolls are due. This information is sent over the mobile-phone network to a central data-centre, which bills truckers between €0.09 and €0.15 per kilometre. Anyone trying to evade the system is supposed to be detected by nearly 300 steel gantries which span the highway and are equipped with cameras; there are

also mobile toll police who perform spot checks.

How have these systems been doing so far? It is easiest to provide an answer in the German case. Even today, almost a year after truckers were supposed to pay their first electronic tolls, the system is still not up and running—a result of its complexity. Above all, Toll Collect and its suppliers were unable to develop the software to marry together all the bits of their elaborate system. After much back and forth, the government and Toll Collect's owners agreed in March to launch the system in May next year with a stripped-down OBU, which cannot automatically update its electronic maps. The full version of the system is now supposed to be functional by 2006.

London's anti-congestion scheme, by contrast, is an overachiever, at least when it comes to traffic management. Congestion in the charging zone, as measured in minutes of delay per kilometre travelled, dropped on average by 30%, which is at the high end of the original projections. Yet financially the project is much less successful. Net income is only £80m, almost 40% less than planned. This is mainly because the number of chargeable vehicles is lower and the scheme more expensive to operate than expected.

The Swiss system, for its part, seems to be an unmitigated success. To general surprise, it was up and running on time. And it achieved its main objective: reducing truck traffic across Switzerland, which increased by 7% during the late 1990s. In the year after the system's debut in 2001, the number of trucks on Swiss roads fell by 5%. What is more, transport companies now try much harder to ensure that their trucks do not cross the Alps empty. Financially, things appear to work, too. Operating costs amount to only 6% of revenues, estimated at €575m last year.

The road ahead

These initial successes, however, do not mean that electronic-tolling schemes will take the world by storm. One barrier is common standards. The current situation is akin to the mobile-telecoms industry before the introduction of the Europe-wide GSM standard: different technologies are in use in different countries, so there is no cross-border compatibility. Although the European Union has developed technical rules, which it will soon make mandatory in a directive, it is unclear whether this will make the systems in different countries interoperable.

There are also political hurdles. Politicians will think twice before they replace a well-known revenue stream, even if it is diminishing, with a new one that might not be as plentiful as expected—as the case of London shows. But perhaps most importantly, voters may not want such systems. As well as imposing new costs on individuals, they also raise privacy concerns. Electronic tollbooths certainly allow for more control. Transport for London, the operator of the city's congestion scheme, for instance, has discovered that there are about 100 “cloned cars”—illegal vehicles that have identical number plates and sometimes even look like legal ones. In Switzerland, it emerged that about 20% of tachographs did not work properly—by an amazing coincidence, mainly those in German trucks.

“Electronic toll-collection schemes and their underlying technologies will probably become the platform for all kinds of attractive new services”

Yet if the history of other comparable technologies such as the internet or mobile phones shows, citizens in the long run will put their worries aside and become consumers. For Toll Collect and its shareholders did get one thing right: electronic toll-collection schemes and their underlying technologies probably will become the platform for all kinds of attractive new services, in particular when satellite-based navigation systems become more accurate.

So expect the car you buy in, say, 2020 to come with a built-in OBU, capable of charging you depending on where and when you drive and how much traffic there is. No doubt it will be able to tell you that it will be rather pricey for you to take a certain road because it is already congested, and suggest an alternative. But it might also be able to inform you about the nearest (and cheapest) petrol station, book your car for servicing and phone the ambulance in case of an accident.

All this could have unpredictable effects. Roads could be more easily privatised, and rates varied accordingly. Car-insurance premiums could be charged by the mile, the kind of road and the reputation of the area the car is passing through. And local and online retailers' fortunes could improve, as shoppers start to think twice about making an expensive trip to a far-away shopping mall.

The OBU could even morph into a virtual back-seat driver that does all these things and more, communicating with the driver using a synthetic voice, speech recognition and face-reading cameras. IBM recently introduced a prototype and big carmakers are working on similar projects. What is merely a box to automate the collection of road tolls today could turn into the car's control centre and communications hub tomorrow. In some parts of the world, road tolling could shape the future of motoring.

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REPORTS

Going with the flow

Jun 10th 2004
From The Economist print edition

Materials: Smart-fluid technology is moving from laboratory curiosity to commercial possibility, and is being put to use in cars, bridges and even digital cameras

THESE days everything seems to be getting smarter. So-called “smart materials” include shape-memory alloys, which change shape according to the temperature, and piezoelectric materials that mechanically deform when an electric field is applied. These materials are said to be smart because they can be used to sense and respond to the environment. But smart materials are not limited to solids; liquids, it turns out, can be smart too. Such “smart fluids” are now finding their way into all sorts of devices, from cars to bridges to digital cameras.

The term “smart fluid” is generally applied to fluids whose properties can be changed by the application of an electrical or magnetic field. In particular, there are electro-rheological (ER) and magneto-rheological (MR) fluids that can change, in an instant, from free-flowing liquids to become more viscous, or even solid. ER fluids consist of tiny dielectric particles dispersed in an insulating fluid such as silicon oil, while MR fluids use magnetisable particles suspended in a non-magnetisable carrier liquid. Normally, the particles are randomly aligned. But when a field is applied, they line up with it, forming long chains that make the liquid more viscous. The process is reversible: once the field is removed, the fluid flows freely again. And by varying the field, the fluid's viscosity can be carefully controlled.

For more than half a century, smart fluids have been little more than a laboratory curiosity. But gradual improvements in their properties—the development, for example, of additives that prevent suspended particles from clumping or settling—and recent advances in the systems used to control them have led to the first commercial applications.

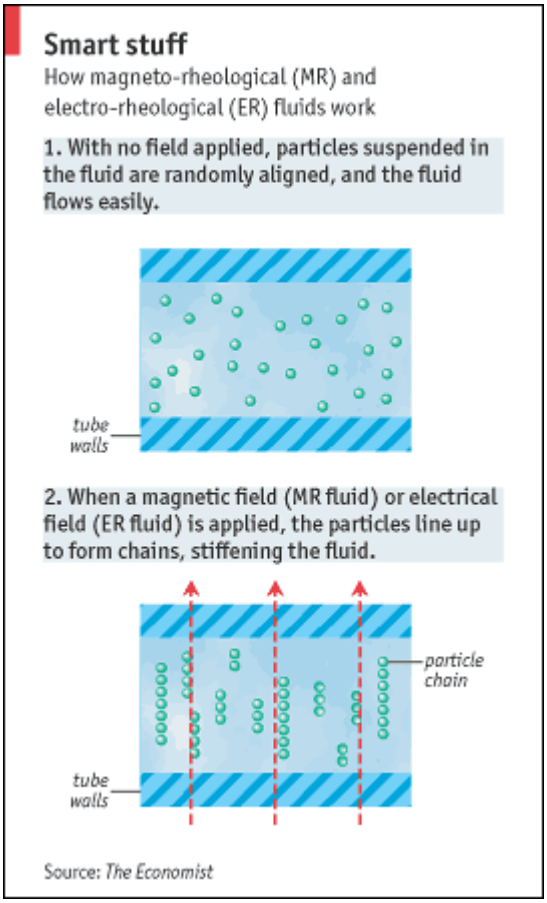
Magnetic attraction

MR fluids are the most widely used kind of smart fluid. They can resist large forces more efficiently than ER fluids, since they require less energy to change their properties. The world leader in the commercial development of MR-fluid technology is Lord Corporation, of Cary, North Carolina, a private firm with an interest in vibration and motion control. Its first commercial success came in 1997, using MR fluids to dampen vibration for drivers of 18-wheel trucks. Then Lord, along with Delphi Corporation, of Troy, Michigan, a former subsidiary of General Motors and a big supplier of car parts, applied MR fluids to car suspension.

The result, called MagneRide, first appeared on Cadillac's Seville models and is now standard equipment on its XLR convertible roadster, and an option on some other models. Sensors monitor the profile of the road surface and provide a permanent stream of information as to what damping is necessary. An electromagnetic coil inside the piston of the damper creates a magnetic field that adjusts the viscosity of the fluid up to provide continuously variable damping. Unlike traditional suspension, the system has no electromechanical valves or small moving parts that wear out, and provides particularly good control at low frequencies. The industry also claims it offers a smoother ride and improves road-holding. The only problem is its high price. About 100,000 cars with MagneRide suspension have been sold since production started in 2002, says David Hoptry of Delphi. So far only General Motors is using the technology, and only in luxury, high-end sports and specialist vehicles. But as the price of the technology falls it will, he predicts, spread into cheaper cars too.

Ford, another carmaker, is researching other applications of MR fluids. It thinks they will be useful one day in automotive suspension, but that they are still too expensive. Instead, Ford

is concentrating on their use in automatic clutches. Prototype designs being studied at Ford's Scientific Research Laboratories are extremely quiet compared with mechanical clutches, and can engage gradually by slowly increasing the strength of the magnetic field. This reduces noise and means the car pulls away smoothly. Ford is also examining the use of smart fluids to make quieter air-conditioning compressors.



Steady improvements in the technologies used to control smart fluids, such as microprocessors and sensors, are opening up a diverse range of new markets. Lord, for example, has figured out how to use MR fluids to reduce vibration in washing machines. Its system works well; again, the barrier to adoption is cost. MR fluids are also appearing in much larger structures. Japan's National Museum of Emerging Science and Innovation, in Tokyo, has installed seismic-scale MR-fluid dampers developed by Lord. They are integrated with the building's structure and are designed to act as huge shock absorbers in the event of an earthquake, soaking up energy and protecting the building from damage. Large MR-fluid dampers are also being put into bridges, such as the Dong Ting Lake Bridge in China's Hunan province, to steady it in high winds.

Meanwhile, CSA Engineering of Albuquerque, New Mexico, has developed a damping system based on MR fluids to suppress vibration during rocket launches, which can damage satellites. MR fluids have also been suggested as a way to reduce vibration in surveillance satellites. Another military use is being explored at the Massachusetts Institute of Technology: the idea is to create a fluid-filled uniform that is flexible and comfortable to wear in normal conditions, but that can instantly be made much more resistant—and ultimately bullet-proof.

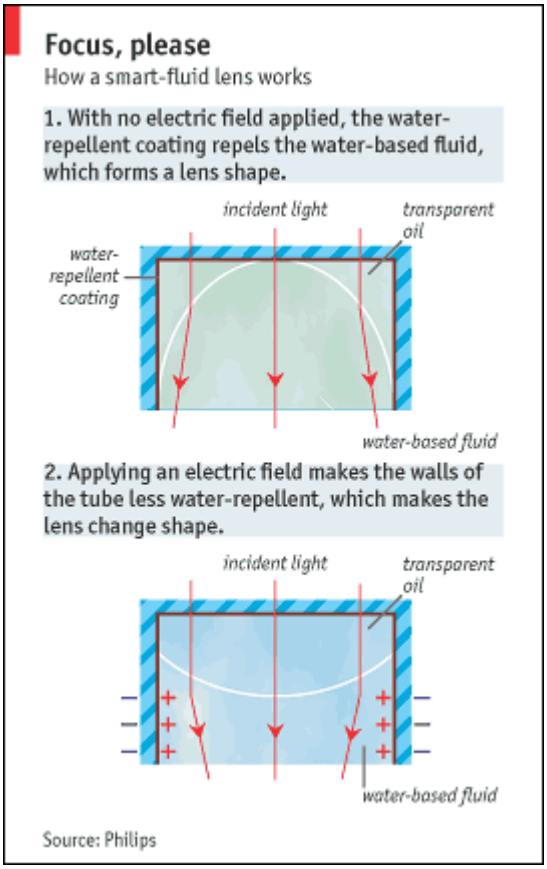
“Using a smart fluid in place of mechanical parts enhances control and increases robustness by reducing the number of bits that can break”

The development of ER fluids has been much slower, since they require large amounts of energy to keep them in a viscous or solid state. But there have been some recent and significant scientific developments in this area, so it may only be a matter of time before ER fluids begin appearing in commercial products too. For if the energy-consumption problem can be overcome, they have advantages over MR fluids. They do not need bulky magnets to be activated and can, instead, rely on only a couple of electrodes. In particular, they might find applications in “haptic” (touch-based) systems. One idea is to use ER fluids to develop Braille readers and writers. Another is to use them as dampers in prosthetic devices.

Existing haptic devices rely on MR fluids. More than a dozen prototype artificial knees, based on MR fluids, are already in use. MR fluids are also used in one type of drive-by-wire forklift truck to impart a sense of rigidity and stiffness to the steering. And carmakers are looking into the use of MR fluids to impart the sensation of road resistance to drive-by-wire vehicles, where the steering wheel has no mechanical connection to the wheels of the car. (The physical sensation of the road is an important component of driving, but is missing in drive-by-wire systems.) Smart fluids could thus be used in haptic devices ranging from joysticks for gaming to instruments for remote surgery.

The benefits of smart fluids are also becoming apparent to the makers of digital cameras. Although the technology is different, the benefit is similar: using a fluid in place of mechanical parts enhances control and reduces the number of bits that can break. Camera designers are finding that, as cameras become

ever smaller, and are integrated into mobile phones and portable computers, the friction between the moving parts of the lens is increasingly problematic. So lenses based on smart fluids could have widespread appeal. They would also be more resilient than traditional lenses, which could be particularly useful in portable devices.



Look smart

Varioptic, a firm based in Lyon, France, and Philips Electronics, a consumer-electronics giant based in the Netherlands, have both developed tiny lenses based on smart fluids. (The two firms are currently involved in a patent dispute over the technology.) Both firms' designs rely on an effect called “electrowetting” where the application of an electrical field alters the surface tension of a liquid. As with other kinds of smart fluids, the effect is not new, but was seen as a curiosity until recently.

Two non-mixing fluids are placed in a short tube with transparent end caps. One is an aqueous (water-based) fluid, the other a transparent oil. The internal surfaces of the tube wall, and one of its end caps, are coated with a water-repellent coating that causes the water-based fluid to form itself into a hemispherical mass at the opposite end of the tube, where it acts as a spherically curved lens.

The shape of the lens is adjusted by applying an electric field across the hydrophobic coating, reducing the surface tension and making the coating less hydrophobic. The water-based fluid is then less repelled by the walls of the tube, which makes the lens change shape. By increasing the applied electric field, the normally convex surface of the lens can be made completely flat or even concave. This allows the lens to adjust its focus. Using two smart-fluid lenses in combination, it is possible to make a zoom lens.

Varioptic recently announced that it has licensed its technology to Samsung of South Korea, for use in camera-phones, handheld computers and other devices. With tens of millions of camera-phones sold each year, that could carry smart fluids into the consumer mainstream. But however they end up being used—whether in cars, buildings or mobile phones—it appears that smart fluids have a solid future ahead of them.

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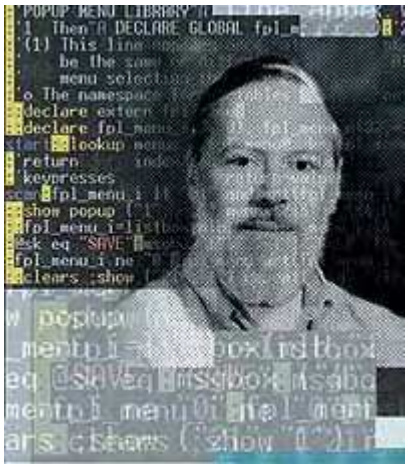
BRAIN SCAN

Unix's founding fathers

Jun 10th 2004
From The Economist print edition

Dennis Ritchie invented C and was one of the key members of the team behind Unix—two developments that underpin much modern software



DIRECTLY west from the southernmost tip of Manhattan, a bit more than 15 miles away, lies the sleepy-looking suburban town of Murray Hill. Just south of the town's centre lies a huge complex of buildings which, despite its size, looks fairly unprepossessing, boring as only business parks in the suburbs can be. But a surprising portion of what passes for modern technology can be traced back to this site, the home of Bell Laboratories, now the research arm of Lucent, but previously that of AT&T, a big American telecoms firm. It was at the Labs, as they are known colloquially, that the transistor was invented in 1947, making possible solid-state computing and paving the way for the microchip.

But the Labs were not only the birthplace, in this sense, of modern computer hardware. Much of modern software—computer programs and the special programming languages in which they are written—originated there too. Two instances in particular stand out: the programming language called C, which from the early 1970s has been perhaps the most popular programming language; and the Unix operating system, first booted up in 1971, and still going strong in everything from laptops to airline-reservation systems. Dennis Ritchie, who has worked at the Labs since 1967, was central to both projects. He is revered as the inventor of C, and, with Ken Thompson, as the co-inventor of Unix.

However, both projects were, in fact, intensely collaborative. Dr Thompson had written C's immediate predecessor, a language known (logically enough) as B. And though Dr Thompson was the first person to work on Unix, Dr Ritchie and others, including Brian Kernighan, Rob Pike and Doug McIlroy (who headed the research group), were fundamental to its development. Dr Ritchie is the last of this group to remain at the Labs—at 62 he retains an aura of youthful enthusiasm. While others have departed for academia or newer companies, he is now the head of systems software research at Bell Labs, and is continuing his research into operating systems and languages.

Dr Ritchie likes to emphasise that he was just one member of a group. With characteristic modesty, he suggests that many of the improvements he introduced when developing C simply “looked like a good thing to do”. Anyone else in the same place at the same time, he implies, would have done the same thing. But Bjarne Stroustrup, who came to the Labs later and designed C++, a further improved version of C, disagrees. “If Dennis had decided to spend that decade on esoteric math, Unix would have been stillborn,” he says.

All the key participants recall the genesis of Unix and C, and the environment at Bell Labs, as something of an idyll. As Dr Kernighan says, “it was a remarkable collection of really outstanding people who were pretty well paid to do whatever they wanted, and most of them had really good taste about what to work on.” Dr McIlroy later wrote that “so many good things were happening that nobody needed to be proprietary about innovations.” Unix was not even given a name for more than a year after it was first invented. So much of what they did was done, initially, for themselves alone, sometimes for sheer amusement, and yet it has had a lasting legacy in the world outside. How did this happen, and what lessons follow for today's programmers?

There we were, all in one place

To answer this question, it is necessary, though difficult, to recall just how comparatively primitive the state of computing was 30 years ago. The first version of Unix was written by Dr Thompson for the PDP-7, a computer made by the Digital Equipment Corporation, which cost a mere $72,000, and came with eight kilobytes of memory, and a hard disk a bit smaller than a megabyte. By contrast, a desktop computer today typically costs a hundred times less, has roughly 64,000 times as much memory and a hard disk 40,000 times as big.

That any software, albeit with many revisions and modifications, could have survived such changes and still be a core technology today is nothing short of astonishing. Amusingly, Dr Ritchie recalls that one of the factors that made Dr Thompson's programming of Unix possible was the fluency he had gained with the PDP-7 while writing an early computer game called “Space Travel”, which also happened to be one of the first programs to run under Unix.

“It is that interplay between the technical and the social that gives both C and Unix their legendary status”

The severe limitations of the computers of the day forced Dr Thompson and Dr Ritchie to be ruthlessly efficient in their designs. Of course, this was true of other operating systems and languages of the time, which have long since faded from use. What distinguished the Bell Labs team is that, from the beginning, they focused on doing things that had not been done before, and doing them with clarity. In the words of Arnold Ross, an American mathematics educator, they “thought deeply of simple things”. One key and ambitious innovation was the idea of portability. At the time, different kinds of computer hardware ran different operating systems. Both Unix and C were, from the beginning, meant to move beyond the PDP-7; indeed, soon after its invention, Dr Ritchie and Dr Thompson “ported” it to the PDP-11, a more powerful model. Indeed, Dr Ritchie says that the PDP-7 was already obsolete at the time. It was the team's success in designing a rudimentary word-processing system using Unix on the PDP-7 that allowed them to get the funds for a PDP-11. The word processor proved enormously useful to Bell Lab's patent division.

In moving both pieces of software to the PDP-11, they accomplished another remarkable feat. Unix was re-written almost entirely in C. Until then, operating systems, which handle all the day-to-day workings of a computer, had been written in “machine language” which was different for different computers, and nearly opaque to humans. C, on the other hand, is a “high-level language” in that it has a greater degree of abstraction. This step meant that Unix could easily be moved to just about any computer of the time that had adequate memory; all one had to do was write a compiler (a program that translates C into machine language) for each computer. And because Dr Ritchie had been careful to keep the core of C very compact, this was relatively easy to do. Dr Ritchie counts the portability of Unix as one of the two major factors for its success, and says that C “tagged along with that”. However, as he admits, the fact is that C was instrumental in making Unix portable.

The second factor Dr Ritchie cites is the “software tool approach” of Unix—breaking up complicated tasks into discrete software tools made the system easier to work with. For example, “paging”—the need, in the old days of character-based displays, to show only one screenful of information at a time—was broken into a separate small program. Dr McIlroy was the one who devised the system of “pipes” that allowed different programs to pass data to one another. This was unusual for the time. Dr Ritchie points out the strange irony that the Unix group was, in fact, outside the main computing centre at Bell Labs, and hence was more willing to experiment.

Another factor helped the duo of C and Unix to spread much faster than they otherwise would have. AT&T was required under the terms of a 1958 court order in an antitrust case to license its non-telephone-related technology to anyone who asked. And so Unix and C were distributed, mostly to universities, for only a nominal fee. When one considers the ineptness of AT&T's later attempts to commercialise Unix—after the court order ceased to be applicable because of another antitrust case which broke up AT&T in 1984—this restriction, an accidental boost to what would later become known as the open-source movement, becomes even more crucial.

The later history of Unix is convoluted, and indeed has again become mired in court battles. Following its origins at Bell Labs, a competing version sprang up at the University of California, Berkeley, which first released its version of Unix in 1977, under the leadership of a graduate student named Bill Joy, who later went on to found Sun Microsystems. Ideological battles raged between adherents of the two versions of Unix through much of the 1980s.

To an extent, this rivalry was stripped of relevance by an unexpected entrant. In 1991, an obscure university student in Finland, Linus Torvalds, announced a project to write a new, open-source clone of Unix from scratch—what has come to be known as Linux. That someone would seek to do this is a

testament to the high regard in which programmers hold the achievement of the Bell Labs group. Dr Ritchie, in return, expresses a high regard for Linux, attributing its success to the fact that it was a unified effort, at a time when other competing versions of Unix were mired in legal battles.

Linux is also the true heir of the Unix tradition in the sense that its development process is collaborative. Dr Pike says that the thing he misses most from the 1970s at Bell Labs was the terminal room. Because computers were rare at the time, people did not have them on their desks, but rather went to the room, one side of which was covered with whiteboards, and sat down at a random computer to work. The technical hub of the system became the social hub.

It is that interplay between the technical and the social that gives both C and Unix their legendary status. Programmers love them because they are powerful, and they are powerful because programmers love them. David Gelernter, a computer scientist at Yale, perhaps put it best when he said, “Beauty is more important in computing than anywhere else in technology because software is so complicated. Beauty is the ultimate defence against complexity.” Dr Ritchie's creations are indeed beautiful examples of that most modern of art forms.

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Apple's iPod

Jun 10th 2004
From Economist.com

A discussion with Tom Standage, Technology Editor of *The Economist*

“As anyone who has got one of these players will know, if you haven't got the right music then you'd rather not listen to any music at all. So the iPod really changes the game because you can always guarantee that the thing you want to listen to is there. Apple was right to bet that this was something people were prepared to pay more money for.”

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Corporate crime

Bosses behind bars

Jun 10th 2004 | LONDON AND NEW YORK
From The Economist print edition

How wise and just is America's new experiment with long jail sentences for perpetrators of large corporate frauds?

ON JUNE 28th, Martin Grass will begin an eight-year sentence for fraud. Until 1999, he was chief executive of Rite Aid, a pharmacy chain whose share price collapsed in 2000 after a $1.6 billion revision to earnings. Last year, Mr Grass pleaded guilty to fraud and agreed to co-operate with the prosecution of former colleagues. He will serve at least six years and 10 months. If that sounds surprisingly long for a country with a reputation for going easy on corporate crooks, consider the fate of Franklin Brown, Rite Aid's ex-chief counsel: he cut no deal with prosecutors, went to trial and was convicted on ten counts. Mr Brown, who will be sentenced soon, faces up to 65 years in prison.

In the popular imagination, white-collar criminals spend a couple of years in a country-club jail and emerge, reborn, as earnest philanthropists—like, say, Michael Milken, who was convicted during America's last big corporate crime wave, in the 1980s, and spent just two years in jail. Outside America, short custodial sentences remain the norm. The typical sentence for fraud in England is four years, and almost never more than ten. This week, for example, Carl Cushnie, founder of Versailles, a trade-finance group, was sentenced to just six years in jail for his part in what the judge called a “massive fraud” in “a grand and evil scheme.” In Germany, the maximum sentence for serious fraud is ten years, though most people get less.

Until recently, Americans treated their fraudsters with even more leniency than the Europeans. But changes to the federal sentencing guidelines in 2001 and 2003 have raised the stakes. The public is now seeing the first results of these changes. Executives found guilty of large, economically-damaging frauds are likely to serve the sort of long jail sentences that America has, until now, mainly reserved for murderers, rapists and armed robbers. Since George Bush set up a Corporate Fraud Task Force in July 2002, the workload of the Department of Justice (DOJ) has soared. Federal prosecutors have charged some 700 defendants in around 300 cases of alleged fraud, including over 30 chief executives.

Life is real

Last month, Jamie Olis, a former mid-level finance executive at Dynegy, a Texan energy firm, began a

24-year jail sentence for his part in a scheme, called Project Alpha, that inflated Dynegy's cash flow in 2001 by $300m. In September, the trial of seven former executives at Enron Broadband, a subsidiary of the fallen energy firm, is due to begin. If convicted, each might face the prospect of spending the rest of his life in prison. So could Jeffrey Skilling and Richard Causey, two ex-Enron executives.

In 2001, America's federal Sentencing Commission decided to combine previously separate guidelines for fraud and theft. It did so by creating a new measure of “loss” to help set the severity of a sentence. The bigger the loss that the thief or fraudster caused, the longer the sentence. Mr Olis would probably have got a five-to-seven year sentence under the old regime, say lawyers. Financial loss is not taken into account in corporate crime sentencing in Britain or in continental Europe.

Congress then instructed the Commission, through the 2002 Sarbanes-Oxley Act, to further increase “significantly” the penalties for fraud. As a result, the maximum sentence possible under certain scenarios has more than quadrupled.

There was a broad consensus before 2001 that sentences for fraud in America were too short. One of the Commission's main tasks is to “provide certainty and fairness in meeting the purposes of sentencing by avoiding unwarranted disparity among offenders with similar characteristics convicted of similar criminal conduct.” If theft and fraud are similar offences, went the argument, should not their punishment also be similar?

As the first long sentences are handed out, several problems have begun to emerge. One issue, raised by some commissioners in 2001, is whether fraud and theft really are equivalent crimes. Each involves loss. But while theft produces a corresponding gain, fraud may not. In public filings, David Gerger, a lawyer who is preparing to appeal Mr Olis's sentence, claims that Mr Olis received no direct financial gain from his part in Project Alpha. He drew only a regular salary and a bonus, which did not rise substantially during the time he worked on Project Alpha.

A second problem is how to measure loss. Mr Olis's judge decided that the loss caused was $100m—which, under the 2001 guidelines, quintupled his sentence. The judge arrived at this number after hearing testimony from an official at the University of California, who said that the university system's employee-benefits fund lost $100m due to Dynegy's falling share price at the time of Project Alpha. Mr Gerger argues that economists have failed to prove any link between a firm's cash flow and share price, and that Dynegy's shares fell for many of the same reasons that caused a 90% drop in the entire energy-trading industry's shares in 2001-02.

Meanwhile, the longer sentences inspired by Sarbanes-Oxley are attracting criticism even from people who helped devise the 2001 guidelines. Frank Bowman of Indiana University, whose ideas helped shape those guidelines, now says they are arguably “too tough”.

Crucially, long sentences for fraud give extra leverage to the DOJ in its use of plea bargains, in which defendants exchange their right to a trial for less severe prosecution, or shorter jail sentences. This certainly cuts court costs. Yet the DOJ's extensive use of plea bargains (97% of all criminal convictions come from pleas) already generates fierce controversy in America. Longer sentences for fraud are reigniting heated debate. In January, Andrew Fastow, Enron's former finance chief, pleaded guilty to fraud, and has since been sentenced to a ten-year term. As it negotiated that deal, the DOJ was also in plea-bargaining talks with Mr Fastow's wife, Lea. Her deal involved much manoeuvring by the DOJ, aimed at applying leverage to Mr Fastow. Sentencing her last month to one year in prison for signing a false tax return—after objecting to an earlier plea bargain with prosecutors as too light—Justice David Hittner said that the DOJ's behaviour “might be seen as a blatant manipulation of the federal justice system and is of great concern to this court.”

Other judges are registering their objections to the DOJ's use of plea bargaining by refusing to hand out custodial sentences at all. This month, Malcolm McVay, a former chief financial officer at HealthSouth, became the latest ex-HealthSouth executive to avoid prison, instead getting six months of house arrest. After he agreed to plead guilty, prosecutors asked for five years in jail. Judges can hand out lighter sentences than required by the federal sentencing guidelines—so-called “downward departures”. But the Commission keeps a record of those judges who depart downwards, prompting fears that Congress, which must endorse all federal judicial nominations, may block the promotion of judges who do not toe the government's line.

Mr Olis was convicted partly on the testimony of two former colleagues, one of them his boss, who approved his work on Project Alpha. Both pleaded guilty and each got a five-year sentence. “This case

had a 19-year penalty for going to trial," says Mr Gerger. "If our system is that harsh and rigid, then I fear that innocent people as well as guilty people will feel they have to give up their right to a trial."

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Microsoft

Loadsamoney!

Jun 10th 2004
From The Economist print edition

Microsoft is sitting on a mountain of cash. What should it do?

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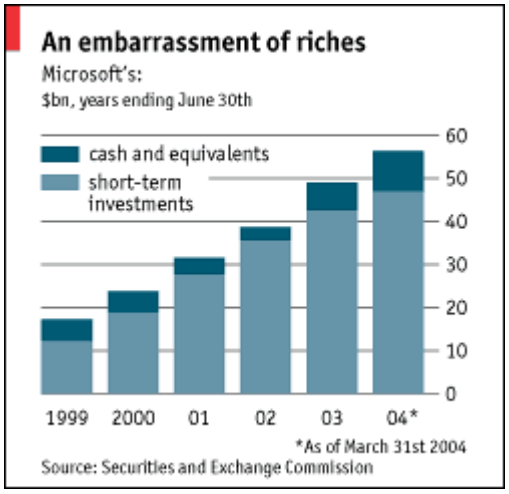

MONOPOLY rents, or the fruits of vigorous innovation? Never mind how Microsoft, the world's largest software company, amassed its $56 billion pile of cash and short-term investments—what should it do with it now? Bill Gates, the firm's boss, is said to like having enough money on hand to survive a year with zero sales. But even that would mean holding on to a mere $28 billion or so. Despite multi-billion-dollar legal settlements with many of its erstwhile rivals and its ongoing antitrust battle with the European Commission—this week Microsoft filed an appeal against the €497m ($612m) fine slapped on it in March—it is clear that the company has more than enough cash to deal with its legal woes, a previous justification for inaction. The company now says that it will outline its plans at its annual analysts' meeting in late July.

One option is to spend the money on acquisitions to drive future growth. This week it emerged that Microsoft held talks last year with SAP, a German firm that is the leading provider of software to large companies, with a view to a possible acquisition. Since SAP's market capitalisation is around $50 billion, this would have neatly accounted for all that cash. Instead, the two firms came to an agreement to improve compatibility between their products. But would buying a large firm make sense?

Not really, for two reasons. The first is that Microsoft has a vast range of partnerships with other software firms, hardware makers, and telecoms and media companies. Making a large acquisition in any of these fields would alienate its other partners and might do more harm than good. The second problem is that, given Microsoft's huge size, any acquisition would have to be enormous to have much impact on its profits—and large technology mergers have a tendency to go wrong. Hence Microsoft's preference for making small, sub-$100m acquisitions to get hold of key people or expertise in particular markets, says Matt Rosoff of Directions on Microsoft, a consultancy. One notable exception was Great Plains, a business-software firm that Microsoft bought for $1.1 billion in December 2000. The two firms are still not fully integrated, notes Mr Rosoff, which suggests that buying SAP might have been a big mistake.

Assuming big acquisitions are off the agenda, Microsoft's second option is to return the cash to its shareholders through dividends, share buybacks or some combination of the two. That is a far less interesting prospect than a dramatic, industry-changing merger or acquisition. But given Microsoft's conservative instincts, it seems likely to take this commendably dull route.

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Casinos

Wedding in Vegas?

Jun 10th 2004
From The Economist print edition

Two casino firms consider tying the knot in Sin City

PERHAPS not since the days of the “Rat Pack” in the 1960s, when Frank Sinatra, Sammy Davis junior and Dean Martin made the city an oasis of cool, has Las Vegas's luck been running so high. Hit hard by the drop in air travel and tourism after September 11th 2001, the casino business has bounced back. That helps to explain a $7.7 billion bid by MGM Mirage, America's third-largest casino firm, for fourth-ranked Mandalay Resort Group.

The bid by MGM Mirage, part-owned by Kirk Kerkorian, a much-feared octogenarian corporate raider, is the biggest yet in the gambling business. It demonstrates the transformation of a former Mafia stronghold into an industry dominated by clean corporations with global ambitions.

The two potential partners occupy different niches in the market for punters. MGM Mirage is the more upscale, with high-rolling casinos such as the Bellagio, MGM Grand, the Mirage, and New York-New York, which features the Manhattan skyline. Mandalay is mostly lower-end, with its Egyptian-themed Luxor and its mass-market Circus Circus casinos.

Together the two firms control around half of the hotel rooms on Las Vegas's famed Strip, the global high street of gambling. Indeed, both firms are unusually reliant on the gambling there: each makes more than three-quarters of its revenue from hotels and gambling tables in the city. The two leading casino operators, Harrah's and Caesar's Entertainment, have spread their blackjack tables and fruit machines more evenly across those American states that allow gambling.

Today, betting big on Las Vegas seems wise. In many ways the city's current growth is a product of the recent downturn, according to Joseph Greff, an analyst at Fulcrum Partners, an independent research company. Since September 2001, Las Vegas has worked harder at stealing convention business from other American cities. It has also benefited from the growing popularity of low-cost airlines, which have increased their flights to the city. Cheaper rooms than can be found in Florida or California, and the continuing reluctance of Americans to venture overseas, have also helped. Behind the scenes, in the past two years casino companies have been busily applying airline-style “yield management” techniques to extract the maximum dosh from each customer.

And then there are the whims of fashion. Films such as “Ocean's Eleven” (a sequel, “Ocean's Twelve”, is coming) and TV shows such as “CSI” (Crime Scene Investigation), have presented images of the Strip to millions of viewers around the world. The city's recent advertising campaign depicts mild-mannered punters letting their hair down in Sin City, before turning back into their more mundane selves for the flight home. The tagline, “What happens in Vegas stays in Vegas”, has been a big hit.

But Lady Luck could again turn her back on the city in the Nevada desert. Antitrust approval for the merger is far from certain, given the market shares of the two firms. There are few obvious efficiencies to be gained from joining two already tightly-run operations, beyond trimming some overheads and combining frequent-visitor schemes. Meanwhile, rivals are adding ever more hotel rooms. Wynn Resorts, founded by Steven Wynn using the money he made by selling Mirage to Mr Kerkorian's MGM in 2000, is building a casino with 2,700 hotel rooms that will open next year. Despite rosy forecasts, that may yet create a supply glut. Nor is running a casino necessarily the money-machine often depicted: Donald Trump, owner of three big casinos in the state of New Jersey, has been negotiating with his creditors to stave off bankruptcy. If even The Donald can lose money in the casino business, surely no one is immune from trouble.

For its part, MGM Mirage has already said that the American market is “somewhat mature”. So why

double the stakes on Vegas? The idea is to create a firm big enough to support forays into Britain, where gambling will be liberalised next year, and Asia, where punters are already getting a taste of American-style gaming (see article). In a city that has hosted many a hasty marriage, most recently the quickly annulled tie-up between Britney Spears and a long-time friend, investors will hope that this corporate union does not prove to be a distraction when the real action lies beyond America's shores.

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Gambling in China

A very big bet

Jun 10th 2004 | MACAU
From The Economist print edition

Las Vegas comes to Macau

THE most striking feature of the Las Vegas Sands' casino, Macau's newest, is its windows. Chinese gamblers, the most hardcore in the world, can lose all sense of time in the former Portuguese colony, often playing for days with no sleep, fortified only by tea and instant noodles. None of the 12 other Macau casinos built before Sands, all operated by a Hong Kong tycoon, Stanley Ho, had any windows.

Sands is the first casino to be opened by a foreigner, after a decision by the Macau government two years ago to end Mr Ho's 42-year-old gambling monopoly and to auction three new gaming licences. The winners include two Las Vegas casino operators, Las Vegas Sands, which owns the Venetian Resort in Las Vegas, and Wynn Resorts, owned by Steven Wynn.

The Americans are betting that with a Las Vegas-style facelift Macau will turn out to be the world's next big gambling destination. Sands is the test. On its first day 15,000 punters fought to get inside, lured by the novelty of friendly service, glitzy design and an absence of prostitutes outside its doors. Macau's economy grew by 16% last year as tourist numbers surged following an easing of travel restrictions on visitors from mainland China, where gambling is banned.

Sands hopes to serve the neglected mass segment. In Macau, high-rollers wagering over $10,000 per “hand” account for three-quarters of gambling revenue. Slot machines account for just 5%, compared with over 60% in Las Vegas. Sands in Macau offers 277 gaming tables and 519 slot machines. Before it opened, all of Mr Ho's casinos together offered only 320 gaming tables.

Sheldon Adelson, chairman of Las Vegas Sands, also wants the biggest bets. Over half of the high-rollers in Las Vegas are Chinese. Mr Adelson hopes that, by giving them a taste of his casino in their backyard, they will gamble at Sands the next time they visit America. Mr Adelson seems even more excited about attracting the “whales”: punters who wager around $150,000 per hand, of whom there are estimated to be less than 250 in the world. More than half, he believes, are from China. But they are probably Mr Ho's territory. He may offer less glitz, but he has spent decades cultivating relationships with such customers.

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Television ratings

Counting the money

Jun 10th 2004
From The Economist print edition

A dominant TV ratings-measurement firm sparks a race controversy

“THIS is not just about television. This is about civil rights.” So says Alex Nogales, president of America's National Hispanic Media Coalition, who reckons that a new measurement technology from Nielsen, the leading TV-ratings firm, undercounts black and Hispanic people. Last week Nielsen launched its new “people meters” in New York. It plans to roll them out in Los Angeles and Chicago. As a result, says Mr Nogales, blacks and Hispanics will get fewer programmes, reduced media influence and less economic opportunity. Politicians, including Fred Upton, chairman of a Congressional committee on telecommunications and the internet, and Hillary Clinton, are paying attention.

Billions of advertising dollars are spent on the basis of Nielsen's measurement of how many people watch particular programmes. In local TV markets the firm now uses a combination of electronic meters, that record which channels sets are tuned to, and paper diaries, in which people of different ages write down what they watch. Nielsen wants to get rid of the diaries and rely on electronic people meters, which it already uses on a national level.

What has caused the fuss in America is that the new sample of households that Nielsen has picked for the new meters in New York seems to be watching much less of the most popular black and Hispanic prime-time shows. “All of Us”, a top show among blacks, for instance, fell from a 3.2 rating under the old system to 1.2. That has led to complaints that minorities are being undercounted. A campaign called “Don't Count Us Out” is drumming up opposition, backed by Rupert Murdoch's News Corporation, whose two TV stations in New York draw big minority audiences. The Media Rating Council, a panel that oversees how TV ratings are collected, has declined to approve them.

Blacks and Hispanics are as high a proportion of the new people-meter sample as they were of the old, so the cause of the shift is a mystery. Capturing ratings using samples is tricky; two different samples of households will not produce the same results. Nielsen says that people with diaries forget to write down niche programmes they view. The new meters show that people watch a diverse range of programmes, at the expense of the most popular fare. But that, it admits, can account for only about a third of the shift in the ratings.

One crucial feature of the meters is that they require more action from households than Nielsen's old method: people have to push buttons every time they watch TV. The “Don't Count Us Out” group says that black and Hispanic households have a higher fault rate in Nielsen's numbers than the sample as a whole, meaning periods of time when data is not recorded properly. It is possible that blacks and Hispanics in large households are not all pushing their buttons every time they watch TV.

Few measurement companies are as entrenched as Nielsen, which began to collect TV ratings in America in 1950. Some of its customers in the entertainment industry argue that its monopoly has led to its current difficulties. The best way to get results from people in samples is to send staff out into the field to encourage them to press the buttons properly, says Alan Wurtzel, president of research and media development at the NBC network. Because Nielsen is a monopoly, he says, it has less incentive than it might to spend on this.

If it had rivals, says David Poltrack, head of research and planning at CBS, Nielsen would have more reason to invest in innovation. Measuring audiences is getting harder, he says, due to personal video recorders (PVRs) which let people skip commercials. Nielsen will not be able to spot if people are using PVRs until next year. Even then it will not know if people are skipping ads—and thus whether advertisers are wasting their money. Time, then, for some competition.

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Corporate tax in Germany

Talking telephone numbers

Jun 10th 2004 | FRANKFURT
From The Economist print edition

Vodafone's giant write-off prompts a fresh look at a crazy tax regime

POLITICIANS of all stripes reacted angrily this week to news that the German subsidiary of Vodafone could deprive the government of up to €20 billion ($21 billion) through tax write-offs. The politicians have only themselves to blame, as they changed the tax law in 1999, allowing Vodafone to apply for the write-off.

In February 2000, Vodafone paid €180 billion for Mannesmann, a telecom and engineering group, using a Luxembourg subsidiary which then sold it to newly created Vodafone Deutschland. This firm, in a tax return filed in 2002, argued that the book value of its holding had fallen, by as much as €50 billion, in 2001.

The politicians are doubly angry, for this tax break not only involves a foreign firm, but €57m paid in bonuses to Mannesmann directors after the takeover is also the subject of a controversial trial. Says one politician, “It's a scandal that the taxpayer ends up financing these bonuses.” Vodafone will find out soon if the tax authorities will allow the write-down. Most tax experts reckon that they will.

The law has since been changed again to free profits earned by subsidiaries from tax. That, too, could benefit Vodafone, if its German subsidiary starts to make a profit.

Constant changes to Germany's corporate-tax regime—long famed for its high tax rates on paper but low payment in practice—have given big firms lots of scope to pare their tax bills. The changes in 1999 exempted from tax both dividends and capital gains from subsidiaries. That was meant to encourage banks and insurers to unload industrial holdings onto booming stock exchanges. But by 2002, when the changes took effect, the boom was over and the new game was tax dodging. Until January, losses—and even merely anticipated losses—could be offset against tax.

Another way to avoid tax is to invest in Brazil-registered securities, backed by an American government guarantee. Thanks to a double-taxation treaty firms can reclaim withholding tax which they probably never paid. Or they can borrow funds—the interest is deductible—to invest in preference shares, receiving a fixed income stream that for tax purposes counts as a dividend from equity investments, and is thus virtually tax exempt. “Every season has its new fashion,” says Holger Häuselmann, a tax partner at Freshfields Bruckhaus Deringer, a law firm.

There is an incentive to borrow to invest in foreign subsidiaries: the loan interest is tax-deductible and dividends from the foreign investment (and gains from its eventual sale) are practically tax-exempt. That is one further reason—the main one being high labour costs—why big German firms increasingly prefer to invest abroad.

Christoph Spengel of Giessen University says that while German firms have invested in France and Britain to create jobs, their investments in Ireland and the Benelux countries have created fewer jobs per euro; they are probably tax-driven.

Four of the big firms in the DAX 30 stock index paid no tax or received a rebate in 2002. Lorenz Jarass of Wiesbaden University has scoured the footnotes of DAX 30 company reports. He found that net tax payments were well below the nominal tax rate in most years during 1996-2003. The figures show that Germany is a “tax haven” for these companies, he says.

Tax experts at big firms dispute his findings, blaming assorted one-off adjustments for painting a false picture. But they agree that the system is a mess—and that the tax authorities make things worse by

refusing to discuss problems with firms or to give them advance rulings on complex issues. This only reinforces the inclination of German firms to invest abroad.

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Gazprom

Taming the monster

Jun 10th 2004 | MOSCOW
From The Economist print edition

Reforming Russia's gas behemoth

WHAT is $2 billion nowadays? A report this week from Hermitage Capital, an investment fund, accusing Gazprom, Russia's state-run gas monopoly and the world's biggest gas producer, of losing $2.1 billion last year due to inefficiency and suspect accounting, has caused barely a ripple in Russia's markets.

Among the charges: that Alexei Miller, who became Gazprom's chairman in 2001 promising to stamp out corruption and mismanagement, has revived his predecessor's trick of using an intermediary firm to transport gas from Turkmenistan to Ukraine and, in this case, onwards to western Europe. The company, Eural Trans Gas (ETG), pipes gas through Gazprom pipelines (for a fee), and even enjoys lenient Gazprom loans, making profits that, says Hermitage, ought to be Gazprom's.

ETG's ownership structure is murky. Gazprom says that the deal with ETG is required by an agreement between Russia and Ukraine. Even if true, says Stephen O'Sullivan of United Financial Group, an investment bank, “it is costing Gazprom in market perception, and they ought to be able to press for better conditions.”

But Hermitage, a minority shareholder in Gazprom, is notorious for launching assaults before its annual meeting, hoping to win a seat on its board. Analysts reckon Gazprom is better run than it was. This year it has promised to separate the convoluted accounts of its different business units, suspected of subsidising one another.

The real issue now is what other reforms will come along, and when. Russia's domestic gas demand is slowly rising, and its exports to Europe could double in the next decade. But Gazprom cannot keep up. The decline of its three main fields is barely offset by a new one that began pumping three years ago. Opening up big new fields on the northern Yamal peninsula and in the Barents Sea will be costly. The International Energy Agency reckons Gazprom should invest around $11 billion a year until 2030. A 25-year gas-import contract with Turkmenistan will help cover its gas deficit, but at twice the price of Russian gas.

If the “ring-fence” banning foreign ownership of most Gazprom shares finally comes down this summer, that will let the firm raise more equity capital.

Last month the European Union (EU) approved Russia's entry into the World Trade Organisation in return for Russia's promise that domestic gas prices, now one-quarter of export levels, would double by 2010. That is, in effect, a gas-price guarantee, which should help independent Russian producers grow.

On the other hand, says Christof Rühl, the World Bank's chief economist in Moscow, the gas-price deal is “a smokescreen obscuring the fact that the EU got no real concessions.” The price rise will be slow, sustaining inefficient industries that make Russia's energy consumption per unit of GDP one of the highest in the world. That gives Gazprom little incentive to develop new fields. And, as Gazprom keeps its monopoly of gas exports and pipelines, that discourages Russia's oil firms, some of which own huge gas fields, from developing them. Siberia is ablaze with the surplus gas from oil wells just burning off into the sky, adding to Russia's pollution problem.

Earlier this year the government backtracked on plans to break up Gazprom, worried perhaps about the effect on the firm that keeps Russia warm in winter. But an unreformed Gazprom's embrace is a bit too warm for comfort.

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Transport in China

Going after the truckers

Jun 10th 2004 | BEIJING
From The Economist print edition

Safer roads, higher transport costs

ALREADY reeling from soaring raw-material costs, manufacturers in China now face a new threat: a traffic-safety law that is forcing truckers to cut their loads, pushing up transport costs.

Competition in road haulage has intensified greatly in recent years as many private firms have entered the business. To keep costs down, firms have maximised their loads, often ignoring weight limits imposed for safety reasons.

Road transport prices at the end of last year were lower than a decade earlier. However, in Beijing alone overloading caused one death a day last year. China's dubious distinction of having the world's highest per-vehicle death toll is due in no small part to excessive loads.

A new traffic-safety law, which takes full effect on June 20th, will bring standardised, far more stringent penalties for overloading. A new unified fine will be around ten times what has been imposed in some areas. Truckers around Beijing say police are now making operators remove the excess portion of loads.

An American manufacturer in the port city of Tianjin says its road-transport costs are up by around 30% since the start of the year, when some provinces began cracking down on overloading as a prelude to the new law. He Jun of Beijing Anbound Information, a consultancy, says some manufacturers report a doubling of road-transport prices.

Though laudable on safety grounds, the new law is curious in economic terms, given how worried China's government is about a possible resurgence of inflation. Perhaps it underestimated how much producers now rely on overloading to maintain profit margins.

Still, China has a habit of passing laws that are soon ignored. In the province of Guangxi, the government has granted a grace period because of complaints by farmers whose produce had become too expensive to ship to market. Overloaded vehicles carrying farm produce have not been required to unload and drivers have been given lighter fines. As a Chinese saying has it, “Policies are ordained on high, below there are countermeasures.”

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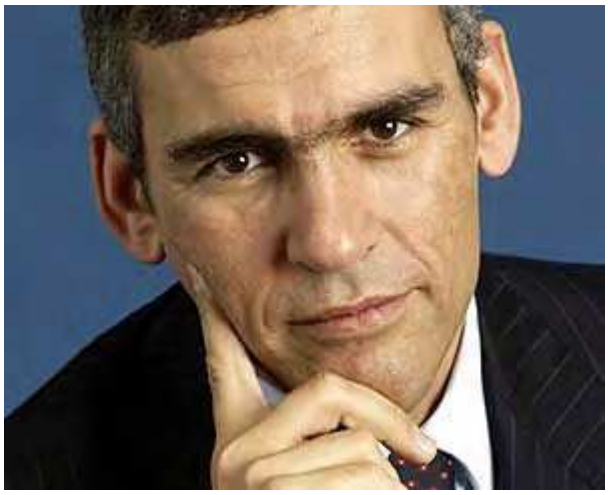
Face value

Simplifying Philips

Jun 10th 2004
From The Economist print edition



Can Andrea Ragnetti make Europe's consumer-electronics giant cool?

WHEN Andrea Ragnetti joined Philips in January last year, he initially stayed in one of the Dutch company's apartments. Naturally enough for the world's third-biggest consumer-electronics giant, after Japan's Sony and Matsushita, it was furnished with things that Philips makes, ranging from lighting to TVs and domestic appliances. In particular, he noticed the stylish coffee machine. After adding water and a pod pre-filled with ground coffee, the only tough bit in operating this device was to decide whether to press the button for one cup or two. Now Mr Ragnetti is on a mission to make all of Philips that simple.

His plan was launched internally to staff this week. It consists of a new brand-positioning strategy which, says Mr Ragnetti, means that all current and future products and processes will have to be based upon three pillars. They should conform to a philosophy described as “designed around you”—that is, very much with the consumer in mind. They should be easy to use. And they should be advanced. This autumn, Philips will begin to introduce its new initiative to the outside world. It could, at first, form part of the marketing and advertising of certain new products, or it could inspire a much wider campaign: the details are still to be decided. However the strategy is expressed to consumers, Mr Ragnetti claims that it will result in a “transformation process” for one of Europe's most venerable companies.

Royal Philips Electronics, to give the 113-year-old firm its full name, has never before had anyone like Mr Ragnetti on its group management committee. He is the firm's first chief marketing officer, has global responsibility and reports directly to Gerard Kleisterlee, Philips's chief executive. It was Mr Kleisterlee who first hinted of a new brand strategy in a speech at the consumer-electronics show in Las Vegas in January. Studies showed, he said, that 30% of home-networking products are returned because consumers cannot get them to work; 48% of people thinking of buying a digital camera delayed the purchase because they saw them as too complicated. “We must start making things easier for consumers or we will never see the real promise of the digital revolution come to life,” said Mr Kleisterlee.

Mr Ragnetti's job is to deliver that promise. He has lots of experience of consumers, following marketing jobs at mighty Procter & Gamble and at Reckitt Benckiser, an Anglo-Dutch group. He joined Philips from his native Italy, where he had helped to revive Telecom Italia. Philips has, he believes, unique competitive advantages. The firm is a great innovator, having invented such things as rotary shavers, audiocassettes and compact discs. But it has often stumbled because of poor marketing. It lost the 1980s video-standard wars, for instance, despite its system being regarded by many as technically superior to Sony's Betamax and Matsushita's VHS—which won by freely licensing its technology. Back then, Philips

was a sprawling multinational with divisions run as separate fiefdoms. Countless re-structuring and ad hoc marketing initiatives have followed, but to little avail—which suggests that Mr Ragnetti may yet find the going tough.

On the other hand, since recording huge losses in 2001 and 2002, Philips has shed some 55,000 employees—nearly a quarter of its 2000 total. Some 30 or so divisions have been streamlined into just five: consumer electronics; domestic appliances; lighting; medical systems and semiconductors. Mr Kleisterlee, a 30-year Philips veteran who took over in 2001, appears to be making progress. In April, Philips reported a modest increase in first-quarter sales to €6.6 billion ($8.3 billion) and a net profit of €550m, compared with a loss of €69m in the same period a year earlier. This was helped by a strong performance in chipmaking and growing sales from a joint-venture with South Korea's LG Group, making liquid crystal displays (LCDs). These are being extensively used in flat-panel televisions and computer monitors. LG Philips, which rivals only Samsung in the LCD business, is due to be listed in Seoul and New York as a separate business.

With divisions such as lighting and medical systems, Philips remains more diverse than its big consumer-electronics rivals. But there are benefits in that, reckons Mr Ragnetti. In line with the new strategy, internal divisions are being broken down. That, he maintains, means experience from one type of business can be more readily applied to another. For instance, the medical division is now making a small defibrillator that can be used at home by people with no medical experience to help revive heart-attack victims. The lighting group is also working with the consumer-electronics division to produce an ambient lighting system that changes colour according to what is being shown on TV. Bathing a room in, say, a soft orange glow during a sunset-scene on the telly is supposed to enhance viewing.

Simpler, but not simple

Making things easier to use does not mean going low-tech, Mr Ragnetti is quick to add. It can require even greater technological sophistication to produce products that do not require their operator to thumb through fat instruction manuals. Indeed, he would like nothing better than to do away with instruction manuals altogether, perhaps by displaying user guides on the LCD screens that now appear on more and more products.

Mr Ragnetti hopes that, through his new initiative to present Philips as a provider of user-friendly, but highly advanced, products, he will find a stronger place for the company in the minds of consumers. Sony is already seen as stylish and Samsung as whizzy, so the competition is tough. But that coffee machine in the Amsterdam apartment shows that it can be done. Called the Senseo, it was developed with Douwe Egberts, a coffee producer, as an easy way to make consistently good cups of coffee with a dash of froth on top. Philips has already sold more than 5.5m Senseo coffee-makers in Europe—and Douwe Egberts enough pods to make 3 billion cups of coffee.

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India's economic reforms

Can India work? - India's economic reforms

Jun 10th 2004 | DELHI
From The Economist print edition

Alamy

The new government's commitment to reform is sincere enough. But can it deliver?

Get article background

THE last time the Congress party formed an Indian government, in 1991, it was soon in crisis. Foreign-exchange reserves dwindled to just three weeks' worth of imports. Some of India's gold reserves were flown to London to help secure a loan from the IMF. Salvaging the economy required the most radical reform ever seen of the “licence raj”—a creaking edifice of central planning held together by miles of red tape. The rupee was devalued; import controls were dismantled and customs duties slashed; industrial licensing was liberalised and the capital markets opened up.

It worked: the crisis was overcome, and India's economy took off, growing at an average annual rate of around 6%, up from 5.4% in the 1980s and 3.5% before that. Under every government since then, the pace of reform has been faltering, but the direction has never changed. Nor is it likely to change now, when Congress finds itself back in power for the first time since 1996, at the head of a coalition that won a surprise victory in elections last month. Two of the main architects of the 1991 reforms, Manmohan Singh, the finance minister, and Palaniappan Chidambaram, the commerce minister, are back as, respectively, prime minister and finance minister.

This time, they inherit an economy growing at more than 8% a year and far from crisis (see table). Nevertheless, there are two reasons to worry that reform may be under threat. First, the last government, led by the Bharatiya Janata Party (BJP), campaigned in the election on a platform of successful economic reform. Its defeat, and that of two reforming state governments in Andhra Pradesh and Karnataka, has led some, on little evidence, to interpret the result as an indictment of liberalisation. In fact, Congress owes its victory in part to dissatisfaction with incumbent state governments and in part to the support of populist parties from two big states, West Bengal and Bihar, which bucked the trend.

Second, Congress has only 145 of 545 seats in parliament. To

rule, it is in coalition with parties identified with narrow regional interests, hostile to reform, and Congress also relies on the "outside" support of India's communist parties. The coalition's Common Minimum Programme (CMP) published last month is marked by concessions to Congress's partners—on privatisation, labour laws, and the power sector—most of which were reflected in the president's speech to parliament on June 7th, setting out the government's plans.

Singh's hymn sheet
India

	1991	2003
Population, bn	0.87	1.06
GDP $trn (PPP*)	1.23	2.86
GDP per person $ (PPP*)	1,420	2,690
Consumer prices, % increase on a year ago	13.9	3.8
Official unemployment rate, %	9.8	9.5
Current-account balance as % of GDP	-1.6	0.6
Exports, $bn	17.7	56.0
Imports, $bn	20.4	71.0

Source: Economist Intelligence Unit
*Purchasing-power parity

Yet the government is stronger than it looks, since nobody on its side wants a return of the last government, let alone another election. It can win some arguments with its leftist partners on issues such as, case-by-case, privatisation. And even if it does not, there is plenty to be done that should be less ideologically contentious. Mr Chidambaram, like a student taking a highlighter to the quotable bits of a set text, has been picking out the CMP's juicy bits. He has been telling a sceptical press, jittery investors and sycophantic industrialists that if the CMP is implemented, "our credentials as reformers will be enhanced."

He will, in fact, have acquired a new set of credentials—as a miracle-worker. The CMP is less ambitious than Congress's economic manifesto (10% annual economic growth; "abolition" of unemployment, hunger, poverty and illiteracy). But its admirable goals—annual growth of 7-8%, alleviating poverty, helping farmers, empowering women, raising spending on health and education and so on—are so vaguely presented that it is like a child's letter to Santa Claus. Everybody can pick a desired outcome from the list, and believe that Christmas is coming. Santa, however, will find the chimney blocked by hard economic reality, in particular a fiscal deficit of around 10% of GDP and a federal system that has proved shockingly bad at implementing even the worthiest policies.

Mr Chidambaram, however, has identified the correct objective. He says he wants to be the "investment minister". What India desperately needs is investment, public and private, above all in infrastructure, education and health. Reform is about removing the obstacles to it.

It is now to have "a human face". The election outcome was a reminder that all the previous government's propaganda about "shining" economic successes was insulting to hundred of millions of Indians who have seen none of them. An estimated 300m Indians survive on less than $1 a day, and 160m lack access to clean water. The UN's human-development report last year reckoned that 47% of children under the age of five were underweight.

Up country

Most of the poor are in the countryside, where more than 70% of Indians live and where reform is needed most. The CMP is stacked with rural initiatives, though woolly on how they will work. Credit to rural areas, for example, will be doubled over the next three years. But many farmers have too little land and too much uncertainty about the future to be willing to invest. Mr Chidamabaram has promised complete managerial autonomy to the state-owned banks, the obvious lenders.

The CMP also promises reform of the grain-procurement system. At present, the government offers a "minimum support price" to rice and wheat farmers. In practice, this is setting the market price and represents a subsidy. The government buys from relatively prosperous agricultural areas: the states of Punjab and Haryana and parts of Uttar Pradesh. More than 220m of the poor all over the country are then entitled to cheap grain from 500,000 "fair-price shops". But distribution is so poor that many still go hungry and government stocks of grain have reached 40m tonnes—far more than is needed and very expensive to maintain. An estimated one-fifth of the food produced in India, including one-tenth of grain reserves, is wasted.

The government also subsidises inputs. Cheap fertiliser and electricity are over-used. Subsidised power encourages relentless pumping of water, so water-intensive crops are grown in drought-prone areas, diminishing water tables. Depressingly, the first act of the new Congress government in Andhra Pradesh was to restore free electricity to some farmers. The CMP goes no further than promising to produce a "road map" on reform of subsidies within 90 days. It also threatens a review of a law passed last year that, in the hope of attracting private investment, required the "unbundling" of the generation and

transmission functions of the loss-making state electricity boards.

Perhaps the CMP's most eye-catching proposal is a promise of an “employment-guarantee act”, to provide one member of each poor and “lower-middle class” family with 100 days of work at the minimum wage on “asset-creating” projects. Arjun Sengupta, a former executive director of the IMF who helped draft Congress's economic manifesto, estimates that a self-selecting group of 50m families might apply. His estimate, assuming a wage of 50 rupees ($1.10) per day, is that the scheme would cost 250 billion rupees ($5.6 billion), about 1% of GDP. But, he says, it would replace other entitlements for the poor costing 180 billion rupees.

Besides meeting the basic needs of the very poor, the scheme would bring two other benefits: jobs and much-needed infrastructure. It is thought that 40m Indians are looking for work. That is already more than 10% of a labour force growing at 2.3% a year. A vast, cheap labour force could go to work on road improvements, rainwater reservoirs, irrigation channels, dykes and community centres. Even close to the cities and highways, roads soon peter out into pot-holed dirt tracks. Three-quarters of cultivated land is unirrigated and dependent on the monsoon—whose lavishness last summer is a big factor in the booming year that has followed.

Some economists, however, are deeply sceptical. “Food-for-work” schemes have been widely used before. Critics say they have done little either to reduce poverty or to produce useful public assets. Implementation becomes swamped in a cascade of petty corruption, where elected officials at all levels seek to recoup their campaign costs. The supposed beneficiaries end up with only a tiny proportion of the public money spent. Surjit Bhalla, of Oxus Fund Management, a hedge fund, argues it would actually be better to hand out cash for no work. Just 100 billion rupees, he says, would be enough to remove poverty on current definitions. And, knowing they were entitled to cash without having to work for it, the poor would be far better placed to monitor and cut corruption.

Who will pay my rent?

However, Vinod Vyasulu, of the Centre for Budget and Policy Studies in Bangalore, capital of Karnataka, argues that such schemes can do some good, provided the works and the disbursement of money are handled at the lowest level of elected government—the village council or *panchayat*. This would not eliminate rent-seeking, which is taken for granted. Mr Vyasulu describes one *panchayat* leader, vehement in her denials of any corrupt activity, but open in acknowledging a 20% commission for awarding a bus-shelter contract. But at least at the *panchayat* level local people can assess the legitimate rent and, every few years, vote bad leaders out.

The troubles envisaged in implementing the employment-guarantee proposal are mirrored in every initiative. And there are plenty of them. A World Food Programme study of one poor district of Chhattisgarh state found it had 400 central and state-government schemes dealing, no doubt sensibly enough, with poverty and social services. But most rural families were unaware of nine-tenths of them.

Besides its new emphasis on the rural economy, the government has signalled a shift of spending towards education and health. Over five years, spending on education is to be raised to 6% of GDP (from about 4%), with at least half of that going to primary and secondary schools (up from about 2.6%), while health spending will go up to 2-3% of GDP.

Again, it is hard to quibble with the goals. Although India is world-famous for the quality of English-speaking technically adept engineers produced by its colleges and institutes, primary and secondary schools are lamentable in many parts of the country. The World Bank says that the number of out-of-school children in the 6-14 age range has fallen remarkably, from 39m in 1999 to 25m in 2003. But that is still one-quarter of all the world's truants. The lack of basic health care is one reason, besides poor nutrition and dirty water, why India scores so badly on indicators such as life expectancy (63) and infant mortality (65 of every 1,000 children die in their first year; 90 in the first five).

Mr Sengupta, however, points out that China, which has a literacy rate of about 85%, compared with 58% in India, spends only 2% of GDP on education. India's problem is not favouring tertiary education at the expense of younger children. A recent IMF conference in India heard research showing that, on any given day, 25% of teachers are absent. In the two states with the worst records, Bihar and Jharkhand, the proportion rises to 38%. A wonderful idea to raise enrolment, attendance and nutrition—the nationwide provision of a free cooked midday meal in schools—suffers from similarly patchy delivery.

The powerful state

If basic services in the countryside suffer from too little government, much of the rest of the economy suffers from too much. Seven of India's ten biggest companies, measured by sales, are majority-owned by the state (five oil-and-gas firms, a steel producer and a bank); state-owned banks control nine-tenths of deposits; the railways employ more people than does any other commercial organisation in the world.

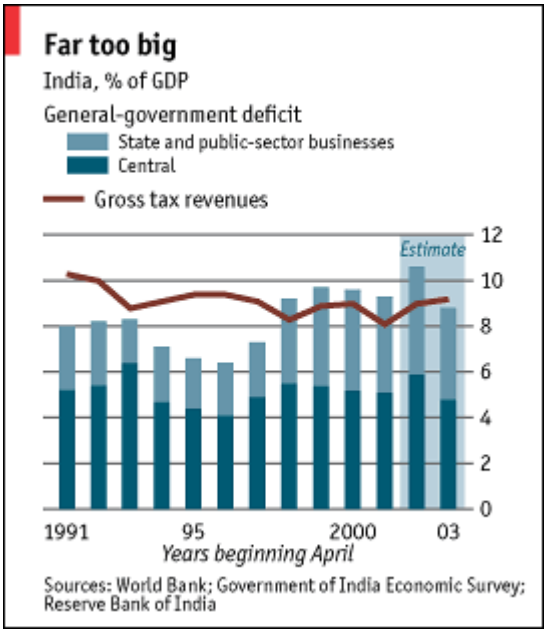
Privatisation started in 1991 with the sale of minority stakes in some state enterprises. In 1999, the previous BJP-led government shifted the focus to the sale of ownership and control to strategic investors. Last year, this ran into a legal quagmire. The Supreme Court ruled that some sales required parliamentary approval. Now, out of deference to its communist allies, the government has said that "generally" profit-making companies—ie, those that investors might want to buy—will not be privatised. The president's speech hinted that the government might try to sell the idea of privatisation by earmarking the proceeds for social-sector schemes.

Nor is the private sector as free as it should be. Not only do relics of the licence raj survive—some 670 items, including, for example, 21 textile or hosiery products, are "reserved" for small-scale producers—the "inspector raj" thrives. A study by the Indian Institute of Planning and Management, a think-tank, says that each industrial unit is still visited by between 40 and 60 inspectors in the course of a month. It cites a survey estimating that Indian managers spend 16% of their time dealing with government officials.

Managers also have to cope with a plethora of investment-deterring labour laws. The president's speech recognised the need for change and much can be done short of the kind of total overhaul that the left is likely to block. Mr Vyasulu, for example, points out that Karnataka was quick to lift a ban on women working after 7pm, when the round-the-clock outsourcing industry took off in Bangalore; in communist-run West Bengal strikes in the information-technology industry were, in effect, outlawed when it was made an essential public utility.

The government has been dropping alarming hints that it might extend to the private sector affirmative-action policies, which "reserve" a proportion of government jobs and educational places for minorities and "backward" castes. This would be a further restraint on investment. It would also be largely pointless, covering only the "organised" sector of India's workforce—ie, in the public-sector or in private companies with at least ten workers, which account for no more than about 8% of employment.

More flexible labour laws and fewer bureaucratic obstacles would help Mr Chidambaram attract the investment he craves—including the three-fold increase in foreign direct investment he thinks India can absorb (a modest enough aim: that would still put FDI into India at less than one-third of that into China). Investors also need faster roads, new air- and sea-ports, reliable power, a better-educated, healthier workforce and all the other wonders promised in the CMP. But how to pay for them? With the occasional blip, India's budget deficit has been worsening ever since Mr Singh left the finance ministry. For the past six years, the public-sector deficit, including both state and central governments, has been hovering around 9-10% of GDP (see chart). Last year there was a slight improvement, albeit achieved by raising more than 0.5% of GDP from selling minority stakes in state companies on the stockmarket.



Because it is financed domestically by a timid banking system that keeps 40% of its assets in government debt, the deficit has not yet brought the crisis advertised by gloom-mongers. However, it now stands between the government and its targets like a row of soldiers. There is very little money available. Almost all tax revenue goes on interest payments, civil-service wages and pensions, defence and subsidies. The deficit also threatens to choke private investment by pushing up the cost of credit when demand for it surges.

Paradoxical as it may sound, Mr Chidambaram's best hope of achieving his goals as "investment minister" is to cut the government's deficit. He is committed to doing this by a fiscal-responsibility law

passed last year. He has already pushed back the deadline for eliminating the revenue deficit by a year, to 2009. His first budget, to be delivered in the first week of July, gives him the chance to begin the serious tax reform his government has promised. As a proportion of GDP, tax receipts are actually lower than a decade ago. The present system is based on harassment, coercion and suspicion (as even the previous finance minister admitted) as well as corruption. What is needed is a simpler structure, less riddled with discretion-based exemptions, and a broader tax base.

In particular, the government needs to fulfil its pledge (and that of the previous administration) to introduce a nationwide value-added tax to replace the current hotch-potch of sales taxes and excise and customs duties. That seems a better idea than its proposal to add complexity by imposing a new levy on top of central taxes to pay for education. But it faces a problem that dogs much reform: it requires agreement with state governments, which at present impose some of the sales taxes.

Indeed, since the state governments account for almost half the fiscal deficit, and for a bigger share still of the “implementation deficit” which stops development spending actually producing development, they and lower levels of government are vital to reform's success. One hopeful approach is to strengthen the *panchayat* system; another is to find ways of giving states incentives for reform, and penalties for failing. That sounds like a pipe-dream—the leadership of the state that has failed worst of all, Bihar, is entrenched at the heart of the ruling coalition. But it is in this field, of centre-state relations, as much as in the nostalgia-inducing ding-dong between reformers and communists, that the real battle for reform will be fought.

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Health-care insurance

In fine fettle

Jun 10th 2004 | NEW YORK
From The Economist print edition

Alamy

America's once-sickly health-care insurers are enjoying fine returns

HEALTH-CARE insurers are among the very few American companies willing to worry about their problems in public. Like hypochondriacs counting their ailments, they trot out a long list: higher costs for medical equipment; bigger payments for doctors; the rising price of drugs. Fail to treat these symptoms, goes the logic, and the result will be terrible, just as it was for four years beginning in 1996, when the industry continuously lost money. The chief executives of two large companies, Aetna and Oxford Health Plans, were both kicked out and that of a third, Cigna, retired early. The only smart operator in the industry seemed to be Citigroup, which had dumped its health-insurance operations just before the slump.

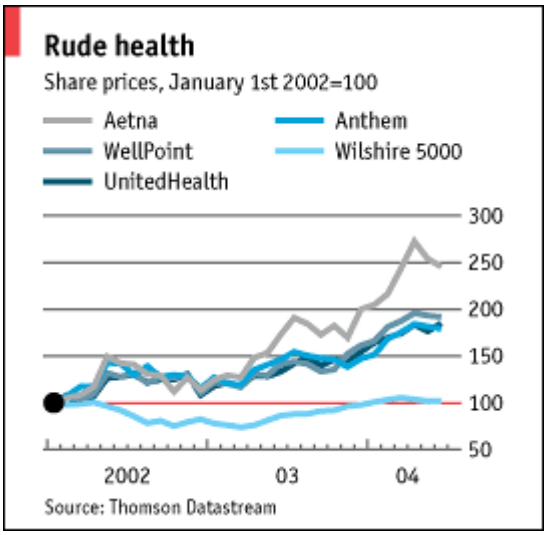
Lost in the crunch was the simple fact that people need health insurance and are willing to pay almost any amount to have it. The industry's customers, including the government, thus have no intention of letting private health insurance fail. The business has been evolving continuously, intermittent disasters notwithstanding, since the late 19th century, when it was first introduced in America at mining and logging camps.

A turn in the industry's fortunes began in 2000. Health insurers' customers (mostly companies, but unlucky individuals too) saw premiums rise at a double-digit rate that has lasted ever since. They put up with these increases partly because the industry was clearly in trouble and partly because they had little choice: every insurer raised rates. Last year even the federal government got on board, approving substantially larger rebates to health insurers for elderly clients receiving Medicare.

Meanwhile, the industry's distress also led to downward pressure on costs. Against a backdrop of scathing press and prodding regulators, hospitals and (particularly) drugmakers sharply reduced their rates of price increase. Doctors were worst off: as individual suppliers, they had least leverage and not only faced lower repayment rates but also had often to surmount daunting and costly bureaucratic challenges to secure reimbursement. Quite a few doctors—typically, surgeons with good reputations—ceased accepting insurance altogether. This did the insurers no harm, as long as the defecting doctors turned their backs on every insurance plan. In fact, it probably did them a bit of good, by eliminating some of their costliest suppliers.

By the end of 2000, revenues were rising faster than expenses and operating margins swung into the black, according to Sanford Bernstein, a Wall Street research firm. By 2003 they had reached 5.1%, possibly an all-time high. That may sound low, but health insurers have huge operating leverage. They do not have to finance inventory. Quite the opposite, in fact: they receive premiums up front and pay out later. Although capital demands in health care are enormous, they are mostly the responsibility of hospitals and labs, not health insurers, whose investments are limited to the technology needed to accept or reject claims. Unlike life and property-and-casualty insurers, health-care insurers have no long-lasting liabilities. Their obligations usually last no more than one year. As a result, margins in the mid-single digits can produce returns on equity in the mid-teens or higher.

Shares of health insurers bottomed in early 2000—as it happened, just when tech stocks reached their peak. Since then, the prices of many have quadrupled. And if shareholders have done well, executives have been more than amply rewarded, according to Graef Crystal, a compensation expert. Presumably, boards judged that the industry-wide resurgence was the product of their companies' individual strokes of genius. William McGuire, head of UnitedHealth Group of Minnesota, earned $30m in pay in 2003 and exercised $84m in stock options from earlier years. This left him with options worth $840m at the company's current share price. Mr McGuire's number two, Stephen Hemsely, earned $13.7m in compensation and holds options worth $350m. John Rowe, the head of Aetna, earned $16m, Larry Glasscock of Anthem $51m and Leonard Schaeffer of WellPoint $27m. Compensation consultants will no doubt have spotted a flaw in these remuneration schemes: Mr Rowe's relatively low pay.



In April, UnitedHealth agreed to acquire Oxford, which was one of the most troubled health insurers in the 1990s but has since recovered. Conveniently, a month before the deal was announced, according to a recent securities filing by Oxford, “eligible members of management” were granted stock worth $17m that would vest if the company underwent a change of control. About $3m of this will go to the chief executive since 2002, Charles Berg, whose options are currently worth $32m, in large part because of the deal.

Whether shareholders and executives can continue to enjoy such returns is questionable. Ellen Wilson, an analyst at Sanford Bernstein, says that the large recent returns will inevitably trigger price wars and rate cuts. Prices and returns in the insurance business tend to run in cycles. Unusually large returns attract capital, which drives them down.

There are other worries as well. A spate of mergers has raised concerns among doctors about too much concentration. There are rumblings of antitrust reviews. And lavish compensation in an industry like health care, which receives a fair amount of taxpayers' dollars, will inevitably draw regulatory scrutiny. Indeed, the industry has been able to extract higher revenues and reduce its costs because it showed distress, not success. Its prospects were better when it could honestly say that times were bad.

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Funds of hedge funds

Borrowing and betting

Jun 10th 2004
From The Economist print edition

Are leveraged funds of hedge funds playing with fire?

Get article background

NOT long ago, investment in hedge funds was strictly for rich individuals: you might make a lot, but you had to be able to afford to lose plenty too. These days institutions from university endowments to pension funds that were once wary of hedge funds' swashbuckling reputation are entrusting money to them. The industry has rocketed: it now manages over $1 trillion, compared with $50 billion in 1990.

Much of the recent growth is due to the rise of funds of hedge funds, which allow investors to diversify their risks by spreading their money across several funds. According to Morgan Stanley, funds of funds have grown at an annual rate of 50% in the past three years, during which time their share of hedge-fund assets has risen from one-fifth to one-third. Despite the part played in their ascent by traditionally cautious institutional investors, funds of funds might be riskier than they seem.

This is because some funds of funds, like the hedge funds in which they invest, are investing not only their equity—the money placed with them by investors—but also cash borrowed from banks in order to boost returns. Although funds of funds' returns have sagged recently, their managers still expect them to exceed the cost of borrowing. So betting borrowed money ought, in theory, to boost returns, to the benefit of equity investors. “When you can borrow at, say, 2%, make 8% returns with low risk—it is almost a no-brainer,” says a banker who lends to funds of funds.

No one can be sure of the figure, but bankers estimate the assets of these leveraged funds of funds to be about $80 billion, up from next to nothing three years ago. Borrowings range from one to four times equity, or maybe even more. According to Hedge Fund Research, a research firm, more than half of existing funds of funds are allowed to invest borrowed cash. Indeed, some worry that there is now tier upon tier of debt, as individuals borrow to invest in funds of funds, which in turn borrow to put money into hedge funds that are themselves placing leveraged bets. “It is a house of cards,” says one London fund-of-funds manager. “Each level of debt amplifies the rest—and that is hard to manage.”

To this must be added the usual lack of clarity about what goes on in the hedge-fund world. Funds' disclosures are not required to be audited, and there are no industry standards about what should be published and how. Many investments by hedge funds are hard to value because they are in assets, such as the debt of companies in bankruptcy proceedings, that are not traded and so have no market price.

This makes it all the more important that fund-of-funds managers are vigilant. But with more money flooding into funds of funds than managers can cope with—many are closing their doors to new investment—there is the risk that managers get complacent, or sloppy. “I've had managers come in willing to give us money without asking basic questions about how we manage risk,” says the manager of a $1 billion hedge fund in London.

Fund-of-funds managers aim to cut through all this complexity, by selecting on their investors' behalf a few of the 6,000 or so hedge funds in existence. To be worth it, their choice has to provide returns in excess of the cost of borrowing, if they are leveraged, and two thick layers of fees (their own, and those of the funds they choose). Both funds of funds and the funds they invest in charge management fees (1% to 3% of assets) and performance fees (for hedge funds, a fifth or more of profits). With interest rates in America set to rise, and hedge funds losing money of late due to choppy markets, this is no easy task.

Some critics are concerned that the fee structure might encourage managers to borrow aggressively.

Management fees are often calculated on the basis of all the money managed—debt plus equity—so that more borrowing means more pay. “It is an enormous conflict of interest,” says Nathan Gelber of Stamford Associates, a pension-fund consultancy in London.

Pick 'n' mix

Most worrying of all, however, is that funds of hedge funds might not be as stable as their basic sales pitch implies. In theory, the performance of a pool of hedge funds should be uncorrelated with the market as a whole. The complex investment techniques of hedge funds mean that some investments rise and fall with markets, while others move in the opposite direction; some funds follow “market-neutral” strategies. Pick a portfolio of these funds, and the resulting returns ought not to be too bumpy.

It might not work that way in practice. Increasingly, says James Hedges of LJH Global Investments, a hedge-fund advisory firm in Naples, Florida, hedge funds' strategies are correlated and their bets concentrated, because managers are making similar bets based on similar expectations. According to Hedge Fund Research, almost all broad hedge-fund strategies lost money in April and May. The reason, says Mr Hedges, is that “interest-rate expectations are 100% correlated.” For instance, most hedge-fund managers were caught by surprise by March's robust employment figures, which raised fears that interest rates would rise more quickly than had been previously assumed.

And the sheer amount of money flooding into hedge funds means that there are more dollars concentrated on the same positions. Funds also use similar models, based on similar data, to manage risk. The danger is that a sharp market move, triggered by a terrorist attack, say, or an unexpected change in interest rates, could cause a lot of hedge funds to unwind their positions at the same time. “The entire presumption of funds of funds, particularly those using leverage, is that the individual hedge funds are uncorrelated to each other, and uncorrelated to the market,” says one New York hedge-fund manager. “But what if they aren't?”

Many hedge-fund managers have an eye out for trouble. They watch the amount of money placed with them by leveraged funds of funds, aware that in times of stress banks might call this money in. This could in turn force hedge funds to unwind positions in a hurry. Skittish bankers, after all, prompted the demise in 1998 of Long-Term Capital Management, a hugely leveraged hedge fund studded with Nobel economics laureates, in the wake of Russia's default. With markets becoming more uncertain about oil, interest rates and terrorism, and with many hedge funds all betting the same way, piling debt on top of debt looks like a risky game.

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Private banking in Asia

Striking it rich

Jun 10th 2004 | HONG KONG
From The Economist print edition

AFP

Bankers are courting Asia's rapidly growing number of super-wealthy

“THE rich”, said F. Scott Fitzgerald, “are different from us.” Bankers might nod approvingly at Ernest Hemingway's reply: “Yes, they have more money.” The wealth-management arms of Citigroup and UBS run week-long seminars at which the children of multi-millionaires are schooled in inheritance law and spend a day pretending to be foreign-exchange traders. Citigroup also advises its richest clients on the (investment) merits of up-and-coming painters and offers a select few a conference call with Robert Rubin, a former American treasury secretary, who sits on its board.

Such perks have long been enjoyed by the moneyed elite in the West, but are now spreading to Asia. HSBC, for instance, holds etiquette classes for the self-made Asian entrepreneur wishing to brush up his table manners. And if an ageing patriarch cannot decide which of his children should take over the firm, the bank will fly in Ivan Lansberg, a top American psychologist who specialises in succession issues.

Asia is the new battleground for the world's private banks. Already the region boasts 1.9m “high-net-worth individuals”—people with more than $1m in investible assets—according to Boston Consulting Group, with a combined wealth of $6.2 trillion (see table). But the attraction of Asia lies less in the absolute sums than in their prospective growth. Rapid economic expansion across the region is creating wealth at an astonishing pace. And more of that money is coming into the orbit of professional managers, as Asia's rich diversify from property and gold into bonds, equities and hedge funds.

Citigroup estimates that private banking in the Asia-Pacific region, excluding Japan, will grow at an annual rate of 20-30% in the next five years. Leadership of the market is still very much up for grabs. UBS and Citigroup (each with $50 billion under management), HSBC ($35 billion) and J.P. Morgan and Credit Suisse ($25 billion apiece) still have less than 3% of the Asian market between them. Deepak Sharma, Citigroup's head of private banking for the Middle East and Asia-Pacific says: “The industry is fragmented. The potential to grow is almost unlimited.”

Capturing that potential is not easy. Unlike western clients, who are often content to invest at home, rich Asians generally demand

a global service, partly because the region's financial crisis in 1997-98 taught them to spread their risks. Banks constantly have to develop new products to keep them happy. For example, Kathryn Shih, head of wealth management for the Asia-Pacific region at UBS, says that three-year callable step-up bonds and capital-protected equity funds are currently in vogue. Asian entrepreneurs also like to be more involved in managing their money than European or Americans are, and are not shy about calling the trading floor directly. They are also less patient and expect to see returns in two years, rather than five.

The preponderance of family businesses in Asia creates another set of problems. The older generation often does not know when to let go: the children—increasingly, educated overseas—have their own ideas about how, or whether, to step into their parents' shoes. “We sit the family across a table,” says Monica Wong, chief executive of HSBC private banking in Asia. “Sometimes it is the first time a son has said directly to his father: ‘Dad, I don't want to run the business.' Asian families don't know how to have these conversations.” The concept of the American-style family office, which combines wealth management and the transfer of estates between generations, is spreading rapidly.

Rich pickings

Asia's high-net-worth individuals, December 2003

	Number of households, '000	Assets under management, $bn	Growth rate 2002-03, %
Japan	1,413	4,517	24
Taiwan	58.0	369	11
Hong Kong	79.0	282	18
Australia	66.0	237	42
China	85.0	224	17
South Korea	69.0	215	7
Singapore	42.0	144	13
India	19.0	71	20
Thailand	10.0	38	29
Indonesia	5.1	29	22
Malaysia	4.6	27	13
New Zealand	6.8	19	29
Philippines	1.5	12	16
Pakistan	1.9	9	18
Asia total	**1,861**	**6,193**	**22**
Global total	**7,960**	**27,397**	**24**

Source: Boston Consulting Group

Private banks in the region also have to spend a great deal of time doing due diligence on potential new clients, since regulations on money laundering are becoming stricter and Asians are often secretive about the origins of their wealth. Far more irksome, however, are the rules that continue to keep large parts of Asia off-limits to western private banks. The Japanese, which still own the bulk of the region's wealth, remain largely “a nation of savers rather than investors”, says Ms Shih of UBS, preferring to keep their cash in local post-office accounts.

South Korea is another largely domestic market, although one with more immediate potential than Japan. Earlier this year, Citigroup bought a controlling stake in KorAm Bank, which increased its private-banking network there from a dozen branches to over 200, while Standard Chartered last month opened its first branch in Seoul dedicated to private banking. Local banks are scrambling to respond. Kim Jung-tae, who heads the biggest, Kookmin, plans to have two dozen private-banking branches by the end of this year.

However, the markets with the biggest potential, China and India, remain closed. Foreign banks cannot offer their services there, while residents are not allowed to invest offshore. Most bankers estimate the wealth of China's rising upper class at $600 billion to $1 trillion, considerably more than BCG estimates, and see it as their top market in the next three to ten years. But they cannot yet tap into that money unless it is smuggled out of the country. “Everyone talks about China's potential,” says Michael Fung, chief executive of J.P. Morgan's private bank in Asia. “But right now there is nothing to report.”

Meanwhile, domestic Chinese brokers are springing up to fill the gap. One local fund manager in Shanghai served his visitors from *The Economist* tea in leaky, plastic cups in a tiny windowless office. He is a million miles away from Armani-suited western bankers, but his company, Future Investment, manages the assets of some of the country's richest people. Even when the rules change, outsiders will find that replicating such personal relationships and building the required infrastructure is costly and time-consuming.

All this makes private banking in Asia expensive and labour-intensive. As Fidelis Goetz, the incoming boss of Credit Suisse's North Asian private bank, says: “The relationship with your private banker should be very close to the relationship with your priest, your wife and your doctor.”

That means one banker can manage only 40 clients in Asia, compared with around 100 in Europe, according to industry estimates. HSBC's Ms Wong calls it a “Cinderella business with very small margins.” The implication, perhaps, is that the market will remain fragmented: foreign banks will find it hard to build big market shares unless they are prepared to devote a lot of manpower to the task.

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European IPOs

Issues of confidence?

Jun 10th 2004 | FRANKFURT, PARIS AND ROME
From The Economist print edition

Three hard-up governments prepare share sales

THE French, German and Italian governments are all short of money. A mark of how desperate they are to plug their budget deficits is their determination to float state-owned assets in the next two weeks, despite the nervousness of stockmarkets.

Having dithered once before, the French state will float 35% of Snecma, a maker of aircraft engines of which it owns 97%, at the end of next week. Deutsche Post, majority-owned by the German government, is due to sell just under half of its banking subsidiary, Postbank, on June 21st. And through Enel, the state electricity company, the Italian government is selling half of Terna, the owner of the national power grid. In all three initial public offerings (IPOs) of shares, the state will retain effective control—a point not lost on potential investors who so far seem less than enthusiastic about buying the shares.

Snecma's sale is particularly awkward. International investors are wary of a company whose majority owner likes to push its firms to do things that it thinks are in the national interest but make little business sense. Nicolas Sarkozy, the newish finance minister, recently suggested that Areva, a profitable, state-run maker of nuclear reactors, should merge with Alstom, a bust engineering group, to help make the former jewel of French industry, manufacturer of the country's high-speed TGV trains, solvent and keep it in French hands.

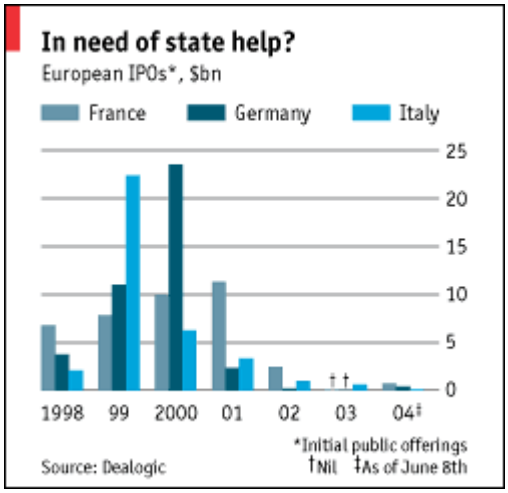
Even at home enthusiasm is muted. According to a recent study by TNS Sofres, a French pollster, almost two-thirds of current owners of equity do not think this is a good moment to float a state-owned company. Only a quarter said they were ready to buy newly issued shares. Moreover, Snecma, which sells most of its wares in American dollars, has been struggling with the strength of the euro. And a large number of its employees are members of France's militant trade unions.

Accordingly, the price range set for Snecma shares is much lower than originally intended. The state now values the company at €4.2 billion-4.7 billion ($5.2 billion-5.8 billion), not the €5 billion-6 billion mooted a few months ago. In fact, the IPO was nearly pulled on June 3rd, the day before book-building started. A firm price is due to be fixed on June 17th and trading on the Paris bourse to start the next day.

Snecma is meant to be a curtain-raiser for further possible sales. The state still owns 50.1% of France Telecom. It could sell another slice of Air France and put up for sale Autoroutes du Sud de la France, a toll-road operator. Another candidate is Aéroports de Paris, which runs the capital's airports, but its planned flotation looks less certain after the recent collapse of a new showcase terminal at Charles de Gaulle airport, which killed four people.

In Germany, there were two small IPOs last month after a two-year gap (see chart), but three other mooted flotations have been postponed. It now falls to Postbank, which hopes to haul in €2.6 billion-3.0 billion, to rejuvenate the German equity market. However, institutional investors consider the price range ambitious: the issue's success now depends on retail buyers. And the waters were muddied last month when Deutsche Bank, one of the issue's lead managers, pondered buying the bank itself before apparently finding it too dear. Postbank is reputed to have the biggest and best retail-banking operation in Germany, but most of its 11m account holders are unlikely to want the additional, fancy services touted as a source of Postbank's future growth.

As in France, this IPO is meant to be the first in a series. Hans Eichel, the German finance minister, once planned to raise over €10 billion this year from privatisations if market conditions allowed. It seems he will have to wait until next year for most of it. Likely sales, at some point, include more of the government's stakes in Deutsche Telekom and Deutsche Post, shares in four airports, including Frankfurt and Munich, and a lot of property. Deutsche Bahn, the national railway company, was being groomed for an IPO next year, but even that now looks too soon.



In Italy Enel, 60% state-owned, will sell half of Terna, its national-grid subsidiary, through a share offering from June 14th to 18th. The government is hoping to swell state coffers by perhaps €1.3 billion. Again, it seems the seller will have to rely on retail interest to get the deal away.

“We want a large base of small shareholders,” says Fulvio Conti, the company's chairman and Enel's chief financial officer. At least one-third of the shares being sold will be allocated to the retail market. “The tariff system for Italy's grid guarantees our income, and we will have an attractive dividend policy,” says Mr Conti.

The risk is that savers will hear Terna and think Enel, which the government floated in November 1999, selling about one-third of the power company's stock in a deal that attracted around 4m investors and almost €17 billion. At the time Mr Conti was shocked that the government decided to sell, at the top end of the price range, more than 30% of Enel, instead of the 20% originally planned. Enel's shares have languished and are now worth around one-fifth less than at flotation. Mr Conti hopes that Terna's shares will be viewed less like Enel's shares than its bonds, which were traditionally part of every widow's and orphan's portfolio. A power grid with price guarantees should provide a bond-like income stream.

All three governments are keen to raise cash but reluctant to cede control. With the politics in the background, this does not bode well for Europe's equity markets.

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Commodities

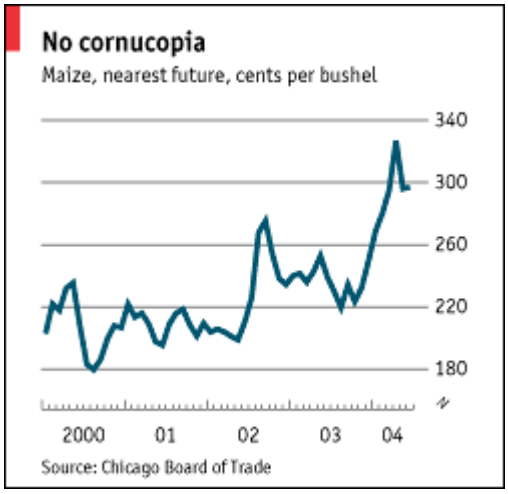
Against the grain

Jun 10th 2004
From The Economist print edition

Is the decline in grain stockpiles a cause for alarm?

JUST over two centuries ago, Thomas Malthus, one of the more pessimistic practitioners of the dismal science, predicted that (exponential) population growth, if unchecked, would overwhelm food supplies (which would grow only arithmetically)—leading to widespread starvation and mayhem. Happily, advances in technology, from fertilisers to tractors, meant that Malthus's doom-and-gloom scenario never came to pass.

However, after five consecutive years in which worldwide consumption of grains—such as maize (corn to Americans) and rice—has outstripped production, the world's pantry is looking empty. According to the United States Department of Agriculture (USDA), despite an expected bumper crop, voracious consumption of grains is forecast to push coarse-grain stockpiles down by 18m tonnes this year to 104m tonnes, the lowest in three decades. The price of maize, the benchmark grain in commodity markets, has climbed by more than a third since last year (see chart), although it has fallen back a bit lately. Is a Malthusian crisis imminent?



Predictably, some environmental groups think so. Lester Brown, head of the Earth Policy Institute, a think-tank, reckons current grain stockpiles could feed the world for 59 days. Generally, 70 days is considered necessary for food security.

Certainly, demand is up. According to the USDA, China has sucked in vast quantities of grains and other commodities to feed its rapid economic growth, pushing up prices. Greater meat consumption by the newly rich in China and other developing countries is also fuelling demand for grain, because livestock consume large quantities of feed.

So, especially in America, is the growing use of ethanol, an alternative fuel made of corn. The USDA estimates that the amount of corn used for ethanol in America's 2004-05 harvest will be 9% more than in 2003-04, when it jumped by 20%. In particular, state-level ethanol-production incentives and bans on certain gases by California and other states have spurred demand for more environmentally-friendly corn-based fuels. At the same time, dwindling farmlands and, especially in China, urbanisation are curbing supply.

Yet Malthusian doom is highly improbable. The paltry crops of recent years might be followed by several years of robust harvests. High prices have a habit of calling forth increased supply. Although China has fewer acres of farmland than it did, the USDA thinks it has ample scope to improve crop yields by using more advanced seed, fertiliser and irrigation techniques.

Moreover, most of the decline in coarse-grain stocks has come in China. Other countries' stocks are flat. Those in the European Union are expected to increase by 27% this year. “And in China, this is in large part due to a very intentional change in policy,” says Edward Allen of the USDA. The government is no longer financing the stockpiling of a year's worth of crops or more. The country has moved towards the market and farmers are choosing to farm better-paying crops. “The situation is unsustainable and it will change,” thinks Mr Allen. “But the issue is less one of capacity than policy.”

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Economics focus

The crude art of policymaking

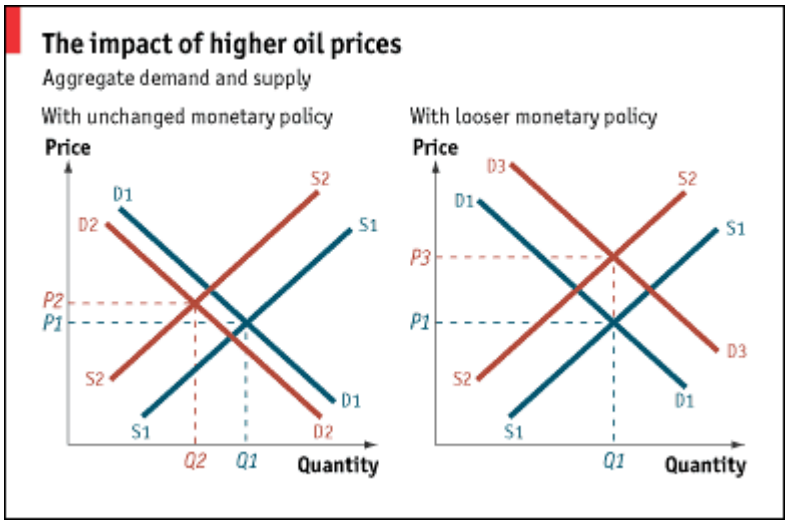
Jun 10th 2004
From The Economist print edition

How should central banks respond to a rise in oil prices?

INFLATION is creeping up. The euro area's average rate of consumer-price inflation rose to 2.5% in the year to May, up from 1.6% in February and well above the 2% ceiling set by the European Central Bank (ECB). America's 12-month inflation rate for the same month (due to be published on June 15th) is expected to rise towards 3%, up from 1.7% two months earlier. The blame for this jump in inflation lies largely with higher oil prices. Despite a dip over the past week, crude oil prices are still 25% higher than a year ago. Should central banks raise interest rates in response to a rise in the oil price?

As Alan Greenspan, the chairman of America's Federal Reserve, acknowledged this week, the answer is not clear-cut. The dilemma is that higher oil prices not only push up inflation (thereby calling for a rise in interest rates), but also dampen growth (requiring rates to be lower than otherwise).

The best way to understand this is to use a standard economic diagram of aggregate demand and supply. In the left-hand chart, the economy is in equilibrium at the point where the aggregate demand curve D1 and the aggregate supply curve S1 intersect, at price level P1 and output Q1. A higher oil price hurts an oil-importing economy in two ways. First, it increases firms' production costs and reduces profits, so they supply fewer goods and services at any given price. This shifts the aggregate supply curve to the left, to S2. Second, higher oil prices transfer income from oil-importing countries to oil producers (some of this may come back as higher exports). Since income and spending are squeezed in the oil-importing countries, the aggregate demand curve also moves left, to D2.



The economy therefore suffers both a negative supply shock and a negative demand shock. Output clearly falls (to Q2), but the impact on underlying inflation is ambiguous: in theory it could rise or fall, depending on the shapes of the demand and supply curves and the relative sizes of their leftward shifts. Some economists even argue that a rise in oil prices is “deflationary”, justifying a cut in interest rates. But this is a misuse of the term. Higher oil prices will deflate demand, but they are unlikely to lead to lower prices. Prices are much more likely to rise, to somewhere like P2 in the chart. Higher oil prices always push up headline inflation. The key issue is whether dearer energy will also feed into prices and wages across the whole of the economy.

In fact, higher oil prices are neither inflationary nor deflationary in themselves. It all depends upon how monetary policy reacts—and hence on where the demand curve ends up. The right-hand chart shows

how policy responded after the 1973-74 oil-price shock. In an attempt to prevent output falling, governments embarked on substantial fiscal and monetary easing. For example, America's Federal funds rate was cut from 11% in mid-1974 to less than 6% in 1975, resulting in sharply negative real interest rates. In effect, this stimulus pushed the demand curve out to the right, to D3, with the aim of supporting output at Q1. But as a result, prices soared to P3. To bring inflation back down, central banks later had to slam on the brakes, which then caused a deeper recession.

Having learnt this lesson, central banks raised interest rates after the oil-price shocks in 1979-80 and 1990-91, to try to hold inflation down. Going back to the left-hand chart, that would imply a further leftward shift in the demand curve and hence a larger loss of output. However, it is important to note that a rise in interest rates does not necessarily imply a tightening of policy if inflation has been pushed up by higher oil prices. Central banks then need to raise interest rates simply to keep real interest rates steady.

Shocked to the core

One clear lesson from the past is that while a central bank cannot prevent oil prices giving a one-off boost to inflation, it must try to prevent this feeding into higher wages and prices of other goods and services. If there is no sign of a rise in the core rate of inflation (excluding energy prices), then there is no need to raise interest rates. There is evidence that rises in headline inflation tend to spill over into wages faster in Europe than in America, because of its less flexible labour markets. If so the ECB is right to be more vigilant when oil prices rise.

On the other hand, the cyclical position of the economy also determines whether central banks need to raise interest rates. The less slack there is in an economy, the bigger the risk that higher oil prices will feed quickly into wages and that firms will be able to pass on higher costs. The recent strong pace of growth in America and the rise in its core inflation rate therefore make a strong case for a rise in interest rates now. In contrast, when oil prices shot up early last year, when the economy was weak and there were clear risks of deflation, the correct response was to cut rates. Today, the euro area still has much more spare capacity than America and so the risk of a jump in wage demands should be smaller. But the ECB is rightly keeping a keen eye on inflationary expectations. Bond markets are signalling a worrying rise in inflation expectations in the euro area as well as in America.

There is also one important difference between the latest oil price rise and those that have been experienced in the past. Previous jumps in the oil price were typically caused by a sudden disruption to supply. In contrast, the recent price increase is largely due to strong demand for oil because of a booming global economy, especially in America and China. Global output is rising at its fastest pace in 20 years. Last year, China accounted for no less than one-third of the increase in world oil consumption. From this point of view the rise in oil prices is an inevitable, even desirable, consequence of a booming world economy. China may be pushing oil prices up, but it is also importing lots of other goods from the rest of the world: it has shifted out the demand curve in developed economies. With fewer negative implications for growth, the inflationary threat from higher oil prices is greater. This further strengthens the case for the Fed to lift interest rates soon.

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About sponsorship

Cassini and Saturn

The last giant

Jun 10th 2004
From The Economist print edition

NASA/JPL/Space Science Institute

A long-planned mission to Saturn is about to arrive

Get article background

ON JUNE 11th *Cassini*, an American spacecraft, flew past Phoebe, one of the moons of Saturn. Though the craft will take a further 20 days to reach Saturn itself, that flyby marked its entry into the solar-system-in-miniature which consists of the eponymous planet, 31 named moons and the myriad un-named moonlets that make up Saturn's famous rings.

It is journey's end in more ways than one. For *Cassini* (named after Giovanni Cassini, a 17th-century astronomer who studied Saturn) is both the last representative of an old way of doing space exploration, and the last scheduled mission to the outer part of the solar system. *Cassini*, when all the bills are in, will have cost about $3 billion. This sum is 10-15 times more than unmanned missions by NASA, America's space agency, are now supposed to cost under the “smaller, faster, cheaper” policy promulgated by Dan Goldin, NASA's administrator during most of the 1990s. But apart from tentative plans for a trip to Pluto and another look at Jupiter's moons, neither of which may actually fly, all the small, fast, cheap missions in the pipeline are to bodies within the orbit of Jupiter. This, in other words, may be the last chance for decades to look at the outer solar system in close-up.

In many ways *Cassini* is the twin of *Galileo*, a probe to Jupiter which was deliberately crashed into that planet in 2003, after spending eight years exploring the Jovian system. It was conceived at the same time as *Galileo*, in the 1970s. Like *Galileo*, it crept in under the wire before “smaller, faster, cheaper” took effect. Like *Galileo*, its target is one of the huge “gas giant” planets that inhabit the outer reaches of the solar system, rather than one of the small, rocky inner planets. And like *Galileo*, it has a small, detachable probe to get up-close and personal with an object of interest.

Saturn's children

In the case of *Galileo*, though, the probe was launched into Jupiter itself. *Cassini*'s probe, called *Huygens*, and built by NASA's transatlantic counterpart, the European Space Agency, will descend to the surface of Titan, Saturn's largest moon. Titan, discovered in 1655 by Christiaan Huygens, was thought for a long time to be the only moon in the solar system with an atmosphere. This is now known to be false (three others have atmospheres, though Titan's is by far the densest), but its gaseous covering, which *Huygens* will investigate, still makes it of interest in the continuing search to find signs of life on a body other than Earth.

Titan's atmosphere—mostly nitrogen, with some hydrocarbons mixed in—is not promising as a habitat. But it might, so the story goes, resemble the atmosphere of the primitive, pre-biotic Earth, and thus yield clues about how life got going on the sun's third planet.

Well, perhaps. But what the exploration of Titan will really do is add another stamp to the album of planetary bodies that are reasonably well understood. All scientific disciplines begin with “stamp collecting” (in other words, gathering examples without really knowing what to do with them). They then progress to classification (when there are enough examples for patterns to emerge). After that, with a bit of luck, comes understanding. Though Titan does not orbit the sun directly, it is planet-sized, and will thus be a precious addition to the collection.

Saturn itself is rather a different sort of stamp. While Titan resembles the rocky inner planets, Saturn is mostly atmosphere. Here, the reference point is Jupiter, the solar system's largest planet. Saturn, the second largest, is similar to Jupiter even down to the rings (though Jupiter's rings are much less ostentatious). *Cassini* is packed with instruments for studying Saturn's atmosphere, magnetic field and so on. But what most people really want to see are close-up pictures of the gorgeous swirls of the planet's atmosphere, and the curious braiding of its rings.

NASA, no slouch at public relations, will make sure the taxpaying public gets these while the scientists get on with the dull but necessary measurements that will help to bridge the gap between stamp collecting and understanding. Those measurements, and that understanding, should also prove that even $3 billion is cheap science when compared with what has gone into, and come out of, the International Space Station.

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Materials science

Sunny side up

Jun 10th 2004
From The Economist print edition

A cheap way to strengthen aluminium

Reuters

A crash on a cloudy day

LEAVING your car out to sunbathe could soon make a lot of sense. Despite the inconvenience of its inside getting hot and stuffy, a spot of sunlight will, if the car is made of aluminium, help it to become stronger and better at absorbing energy in a crash. What is more, if you own a plane, helicopter or spacecraft, it, too, could benefit from a little baking in the sun.

Normally, the aluminium alloys used in the automotive, aerospace and building industries are hardened by curing them at high temperatures in a furnace. But this takes lots of time and energy. So now, Roger Lumley, a metallurgist who works at the Commonwealth Scientific and Industrial Research Organisation in Melbourne, Australia, has developed a new process to toughen aluminium alloys. This process involves minimal time in the furnace and maximal time out in the sun.

At the moment, aluminium alloys are usually hardened by heat-treating them at around 160°C, a process that takes between 8 and 24 hours. During that time, fine crystals of the alloying materials, such as magnesium-silicon and magnesium-zinc, precipitate from the “solid solution” that forms the alloy and cluster together. This helps to harden the material by distorting the crystalline structure of the metal and making it more difficult for defects to spread.

Dr Lumley was investigating precipitation patterns in aluminium alloys when he came up with the idea of using heat from the sun instead of heat from a furnace. Using a powerful electron microscope to watch the crystals form, he realised that he could manipulate their precipitation by interrupting the heat treatment.

The strongest aluminium alloys have particularly fine precipitates that are widely distributed in tiny clusters. Dr Lumley noticed that, if he stopped the heat treatment at just the right point, he could prevent the precipitates from growing too large and encourage them to form smaller clusters with a finer distribution. Many experiments later he has found that around one hour of heat treatment in a furnace gets the precipitates to their optimum size. After this, normal daytime temperatures (in Australia) will do the rest of the work, encouraging the precipitates to reorganise themselves and form a finer distribution throughout the structure.

As well as saving energy by reducing time in the furnace, the sunlight baking process also makes aluminium alloys around 20-40% tougher than the traditional product, and as much as 800% better at absorbing energy during an impact. For the car industry, this could be great news, enabling it to produce

safer cars with crumple zones that will absorb more of the impact in a crash. Another beneficiary will be the aircraft and aerospace industry, where the process could provide useful cost savings without compromising quality or safety.

Australia, of course, is a pretty sunny country. But even nations in more temperate climes could benefit. Sun-baking will work (albeit rather more slowly) in such places, and aluminium car-body panels made this way will, in any case, continue to strengthen throughout their lives. Sunbathing for humans may have gone out of fashion, but sunbathing for cars, buses, trains and aeroplanes looks set to be the next hot trend.

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Environmental pollution

Hong Kong phooey

Jun 10th 2004 | HONG KONG
From The Economist print edition

Two pollution problems may be used to get rid of each other

HONG KONG has more restaurants than anywhere else on Earth—at least per chopstick-wielding person. It has a lot of diesel-powered lorries and buses, too. Neither improves the territory's environment. Hong Kong's 10,000 restaurants produce more than 20,000 tonnes a year of waste cooking oil—and that is without counting the stuff poured slyly down the drain. Meanwhile, its vehicles belch out so much noxious diesel soot that the air pollution index is regularly stuck at “high”.

Technological ingenuity may, however, be able to use these two problems to cancel each other out. Diesel engines are catholic in their tastes, and do not have to run on fuel made from petroleum (indeed, Rudolf Diesel's early prototypes ran on coal dust). That has led in other places to the development of so-called biodiesel fuels, which are made from plant oils—the same oils that are used in cooking. Although biodiesel is (before tax, at any rate) more costly than traditional, petroleum-based fuel, it does have environmental advantages. Traditional fuels are hydrocarbons (that is, their component molecules are made only of hydrogen and carbon). Biodiesel molecules contain oxygen, as well. The extra oxygen promotes more complete combustion to carbon dioxide and water. Levels of pollutants such as carbon monoxide, unburned hydrocarbons and small particles of soot are reduced by as much as 90% as a result. So, thought Sjouke Postma, the managing director of a Hong Kong-based firm called Hednesford, why not dispose of one pollutant (waste cooking oil) by burning it in diesel engines and thus reducing the level of another pollutant (vehicle fumes).

Of course, it is not quite that simple. Plant oils are made of molecules called triglycerides. These, in turn, consist of a molecule of glycerol (a type of alcohol) linked to three fatty-acid molecules (snake-like structures with a hydrocarbon tail and an oxygen-rich head). To make a mixture that burns well, the triglycerides are broken up by a process called transesterification. This is a one-step reaction which liberates the glycerol and links the fatty acids with methanol, another type of alcohol.

Even fresh plant oil that is destined to become biodiesel is treated this way. The glycerol is valuable, and is extracted and sold. And linking the fatty acids with methanol neutralises their acidity, thus stopping them from corroding the engine. Hours of abuse in woks, though, mean that a lot of the triglycerides in used oil have already broken up. Unfortunately, this is not good news. The remaining triglycerides still require transesterification, while the fatty acids that cooking has liberated still need to be linked with methanol. Without careful tweaking, these processes are incompatible.

At the moment, therefore, the consortium that has taken up Mr Postma's idea is looking for a partner that can manage this chemical trick efficiently. That consortium includes such regional luminaries as the Asian Development Bank, PetroChina (mainland China's biggest oil firm), the Kadoories (one of Hong Kong's richest families) and Noble Group (a big Hong Kong-based logistics and shipping firm).

As this roll-call of local capitalism suggests, the motive for the project is not merely environmental. As the old saying has it, “where there's muck, there's brass”. The aim is to produce enough recycled biodiesel to run between 800 and 1,500 vehicles. A tidy reward for making Hong Kong a tidier place.

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About sponsorship

Conservation

Hunter-programmers

Jun 10th 2004 | NORDHOEK
From The Economist print edition

A new device puts an old skill to work

WHAT really goes on in Africa's remote national parks? Though satellite imaging and aerial surveys give a rough idea of changes in animal and plant life, the most detailed data still have to be collected on foot. This is all very well for those places where skilled botanists and zoologists swarm in the undergrowth, but what about everywhere else?

When Ebola fever struck Lossi sanctuary in eastern Congo two years ago, the zoologists who were studying the gorillas there noticed that 139 of their apes had disappeared, presumably killed by the disease. As an aside, they also recorded chimpanzees, antelopes, bush pigs and other species that were struck down, suggesting Ebola is more deadly than once thought. The toll elsewhere was unknown.

The useful extra data were collected only because the zoologists in question had a convenient system for doing so. They were testing the prototype of CyberTracker, an invention of Louis Liebenberg, a self-taught animal tracker who lives in Nordhoek, near Cape Town. CyberTracker is a hand-held device that lets users record what they see quickly and easily, and then plots maps showing exactly where the observations were made, using the Global Positioning Satellite navigation system.

Mr Liebenberg's invention is designed to allow currently untapped expertise to be used when trained scientists are not around to note things down. Rangers, park guards and even well-informed tourists could use it to record handy data as they work or play. There are other advantages, too. Many expert trackers are illiterate, so CyberTracker uses only symbols and pictures. And it is cheap. The software to run it, which is now available for general use, can be downloaded from CyberTracker's website for nothing. All that is needed to run it is a mass-produced hand-held computer.

Mr Liebenberg is now engaged in persuading park managers across the continent to use his invention. So far, parks from 30 countries have signed up. In South Africa's Kruger park, for example, 120 rangers whose main job is deterring poachers employ CyberTrackers to record and map the damage done to trees by the park's burgeoning elephant population. At the Gamba protected-area complex, on the coast of Gabon, patrolling rangers make daily logs of deposits of flotsam from the industrial world that has arrived on their remote Atlantic beaches at the same time as they record the comings and goings of the local leatherback turtles.

Mr Liebenberg sees an even wider potential for his invention. In the hands of hordes of amateur experts around the world (Britain's army of ornithologists, for example) it could be used to assess the impact of climate change on many habitats and species. And conservation is not the only application. Using a map of criminal activity produced by a CyberTracker, police arrested and convicted a gang of muggers that had been prowling a beach near Mr Liebenberg's home. He tracked the muggers' footprints on sand dunes over the course of several weeks, to get data for the maps, and established a pattern that helped police predict the attacks, so that they could lie in wait. A hospital in Cape Town is also using the device, to record and map activity in its wards in an effort to improve management there.

The most welcome consequence, however, may be for non-cyber trackers. The tool is particularly effective when employed by skilled traditional hunters, such as San bushmen in Botswana, some of whom were the first to use it. They have recorded remarkable observations. The /Gwi, a group of San who live in the central Kalahari desert, for example, have used the CyberTracker to show that their skills extend beyond the ability to track useful game. Expert /Gwi can, it seems, differentiate between at least 15 types of ant.

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About sponsorship

Bloomsday

An unforgettable odyssey

Jun 10th 2004
From The Economist print edition

Corbis

Is the fuss over James Joyce's Ulysses greater than the book?

THE date is as well known to students of English literature as the beginning of the first world war is to military historians: June 16th 1904 is “Bloomsday”, the 24 hours into which James Joyce compressed the wanderings of a Jewish Dubliner—a decent, lustful, advertising salesman named Leopold Bloom. He is the principal figure in “Ulysses”, a sprawling, difficult novel that marked the start of the modern movement in English literature. Its adoption of an original style known as “stream of consciousness” made it one of the seminal works of the 20th century.

Bloomsday has been celebrated by devoted readers of Joyce all over the world for 50 years or so. In Dublin in particular it is regarded as a splendid excuse for a party, beginning at breakfast and often ending in drunken gloom and rancour, just like the book. The breakfast is significant: Bloom's first scene starts with the purchase from a butcher (and the subsequent cooking and consumption) of a pork kidney, a “moist, tender gland”, price threepence.

To celebrate the centenary of Bloomsday, 10,000 tourists and local people—everyone is welcome—will breakfast on Dublin's O'Connell Street in three sittings. Their breakfast is being sponsored by Denny, whose sausages (so the book says) nestled next to Bloom's kidney on the butcher's slab. The firm is to provide breakfast rolls filled with sausage, bacon, black pudding and hash browns. But no kidneys, of any variety; no drink either.

This mass devotion to James Joyce is a fine example of a spreading trend in tourism in which a dead author becomes a lure for living admirers and the merely curious. Laura Weldon, who runs “ReJoyce Dublin 2004”, the official organiser of a five-month-long celebration of Bloom's busy day, says the idea is “to give the masterpiece back to the people in intelligent, but accessible ways.” A late-night light show on the banks of the River Liffey will project images of Joyce; and Joseph Strick's film of “Ulysses” will have an open-air screening. There will be a concert, exhibitions, readings and guided walks. It is “a unique, high-quality cultural tourism experience,” says John O'Donoghue, Ireland's minister of tourism. An international symposium will consider more recondite areas of Joyce's work—“The Menippean Strain in Ulysses”, for instance.

A large majority of the breakfast celebrants will not have read the book, and a free breakfast might not

be enough to get them started. Plenty of readers are familiar with the first line (“Stately, plump Buck Mulligan came from the stairhead, bearing a bowl of lather...”), but few get past the first 50 pages. Roddy Doyle, a popular Irish writer, created a small furore earlier this year when he denounced Ulysses as over-rated and over-long. “It could have done with a good editor,” he boldly declared.

Other Dublin writers sympathise. John Banville, a distinguished Irish novelist, thinks that Mr Doyle expressed a more general exasperation with the Joyce myth. Joyce is a peculiar sort of icon. He was an exile who was born in Dublin but left for the continent, never to return, after the page proofs of his first book, “Dubliners”, were deliberately destroyed by a printer in 1912. “Ulysses” was written mostly in Trieste and Zurich. As Mr Banville says, Joyce's Dublin, drawn from his own unhappy memories, is grim, grey and paralysed. Joyce would probably have had a good laugh at his Irish apotheosis.

Is “Ulysses” as great as its reputation suggests? Some of its 18 episodes are so bizarre that they might have been written in a secret code, but the narrative becomes compelling; the language is sharp and brilliantly coloured. Reading it is hard work, but the book is not inaccessible. It helps, though, to have a good guide.

Some think the best way to approach it is back to front, starting with the silent monologue of Molly Bloom, Leopold's wife, and then turning back to Bloom's catechism in the penultimate episode. Mrs Bloom's thoughts stream powerfully through her consciousness for 25,000 unspoken words, without any punctuation at all. In her soliloquy she contemplates Bloom's flawed character, their unhappy marriage, her lovers, men's frailty and women's vulnerability. Her memories are saturated with eroticism.

The very end of the book is almost as well-known as the beginning: “I put my arms around him yes and drew him down to me so he could feel my breasts all perfume yes and his heart was going like mad and yes I said yes I will Yes.” A great book? Yes it is Yes.

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About sponsorship

Identity and immigration

The end of America

Jun 10th 2004
From The Economist print edition

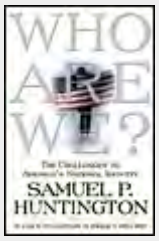
America is a nation of immigrants. Could immigrants be its undoing?

SAMUEL HUNTINGTON'S new book has attracted ferocious criticism. Mr Huntington is a professor at Harvard University, a noted scholar and the author of the global bestseller, “The Clash of Civilisations and the Remaking of World Order” (a book whose pessimistic thesis has seemed all too plausible since September 11th 2001). But these distinctions have not protected the author or his new book from accusations of racism, bigotry and wilful distortion of the facts.

These passions have been aroused partly by the claim that the essential America remains, as from the start, Anglo-Protestant. Causing even greater offence is the idea that Mexican immigration is a grave threat to the nation's identity. Both points will strike many people as unpalatable—but truths sometimes are. What matters is whether these claims are right.

The United States does have its political and cultural roots in British Protestantism. It is easy to link the dissenting self-reliance of those early arrivals with the qualities one still thinks of as quintessentially “American”: religious tolerance (embodied in the separation of church and state), suspicion of over-mighty government, regard for liberty, and a prodigious appetite for work. It must also be true, as Mr Huntington argues, that if the early settlers had been, say, French Catholics, then America would have turned out very differently.

Who Are We?: The Challenges to America's National Identity
By Samuel P. Huntington



Simon & Schuster; 448 pages; $27. Free Press; £18.99

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Even so, those distinctively American qualities are no longer confined (if they ever were) to the Anglo-Protestant tradition. What is so striking about the American experience is that succeeding waves of non-British, non-Protestant immigration have only entrenched those national characteristics. Arguably, the mere fact of being a migrant—in its own right an expression of individualism, ambition and self-reliance, and often a plea for religious tolerance too—may incline people more towards those tendencies than any particular religious or ethnic membership.

Why is Mr Huntington so concerned about Mexican immigration? His views on this are subtler than some critics claim. He has been misrepresented—accused, for instance, of arguing that Mexicans are taking longer to learn English than earlier immigrants did, which is not in fact true. Actually, he agrees that fluency in English among first- and second-generation Mexican immigrants follows the usual pattern for non-English-speakers: the first generation does not achieve fluency, the second does. But that is not the point; the point is what happens in the third generation.

Historically, third-generation immigrants, unlike their parents, know little or nothing of the ancestral language. This is partly because the second generation looks down on it. Yet big majorities of second-generation Mexicans, Mr Huntington points out, emphasise the need for their children to be fluent in Spanish. Combine this with the scale and regional concentration of immigration from Mexico—which make retaining fluency in Spanish both more feasible and more rewarding—and you are led to wonder whether America's astounding ability to assimilate immigrants has finally met its match.

Language, culture and identity are intertwined. Mr Huntington's fear is that Mexican immigration will turn America into a bilingual, and hence divided, nation. Whether this would be a worse America, which Mr Huntington appears to take for granted, is by no means obvious. What he proposes to do about it is unclear as well. Still, a scholar ought to be able to pose questions about a subject as important as this, in a book as interesting as this, without being accused of racism.

Who Are We?: The Challenges to America's National Identity.
By Samuel P. Huntington.
Simon & Schuster; 448 pages; $27. Free Press; £18.99

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New fiction

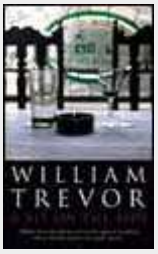
Another view of Ireland

Jun 10th 2004
From The Economist print edition

JAMES JOYCE'S “Ulysses” was first published in 1922, 18 years after the day that it describes. In its extreme attention to the play of language, and the sheer depths of its self-conscious obscurity as a work of fiction, the book seemed to many critics to mark the end of the realistic novel, the kind that had been driven for the best part of a century by such relatively conventional matters as plot and characterisation.

Over the past 40 years or so, however, it has become clear that Joyce, great though he may have been, has proved to be an aberration. He was even an aberration among Irish writers. His fellow countryman, William Trevor, is one of many to have proved in novels and collections of short stories (including this, his latest) that readers, above all else, want to see their own lives reflected in the stories that writers create for them. The greatest fiction is great precisely because it concerns itself with universal generalities.

A Bit on the Side
By William Trevor



Viking; 244 pages; £16.99. To be published in America by Viking Press in October

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Joyce was the supreme example of the writer's writer. His fellow countryman belongs firmly with his readers. In these new stories, Mr Trevor continues to be the great chronicler of tiny, painful nuances in relatively impoverished rural Ireland. With his writing, the reader never pauses to admire literary elegance for its own sake. There are no verbal flourishes of any kind, no self-preeningly long sentences and no self-conscious Joycean obscurities. Each and every sentence is as long and plain as it needs to be, crafted in a very particular way to engage and draw the reader into the small human drama which is under scrutiny. But Mr Trevor's dramas are small only in so far as they are the dramas of ordinary people living the kinds of complicatedly painful lives that ordinary people tend to live.

The author is especially good on issues of concealment and exposure. Time and again in these stories, the tension hangs on the need or the wish to conceal—from oneself or from others—some explosive truth that, if it were known, would blow apart the relatively uneasy calm of life in a world of difficult accommodations, bungling and small-scale hypocrisies. Life's tragedies, they say, are often small in scale and not known to many; they go on in odd chimney corners, with few present even to see them, let alone to feel pity.

A Bit on the Side.
By William Trevor.
Viking; 244 pages; £16.99. To be published in America by Viking Press in October

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About sponsorship

The economics and sociology of sport

Too serious to be left to the fans

Jun 10th 2004
From The Economist print edition

AFP

Much like Romans, ancient and modern

THE fanfare surrounding this summer's Olympic Games in Athens and the Euro 2004 soccer tournament, which starts in Portugal this weekend, is sure to include much curmudgeonly hand-wringing over modern man's obsession with sport (and it is mostly man's). But is it really so modern? The authors of “The Economics of Sport” ask their readers to consider the following signs of obsession, and to guess which sport they are describing: athletes' pay running at ten times that of a doctor or a lawyer; promotional symbols and motifs festooning cups, lamps and fans' homes; and huge profits arising from the ownership of the rights to players.

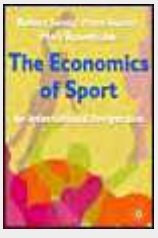
An account of soccer today? Actually, no: it is instead a description of the gladiatorial games of Roman times. In this unusually readable economics tome, the authors offer a reminder that money has never been far from athletic exploits. In more recent years, however, sport has taken on the trappings of modern business. Football clubs now have stockmarket listings; top players' pay would make the most pampered corporate boss blush; and the behaviour of sporting leagues is scrutinised by antitrust authorities.

All this has led economists to apply to sport the same economic tools used on any other industry. Unlike much recent writing about the subject, though, this book takes a global view of a variety of spectator sports, from Formula One racing to the type of football played at American universities. Readers with a financial bent will appreciate the hard-headed analysis of a human endeavour that is too often clouded by the passions of crowds.

Perhaps the most pernicious myth they lay to rest is the idea that governments can use sport as a tool of economic development. Billions of dollars of public money have been used to construct stadiums around the world, yet the benefits in the form of economic growth have been elusive. In America, politicians have been especially keen to use taxpayers' money to support local teams, but other countries too have pursued sporting events as a tool of economic salvation and urban renewal, witness the eagerness with which countries recently bid to host the 2012 Olympics. This is mostly a fool's errand.

For readers who can't bear to have their favourite games reduced to mere dollars

The Economics of Sport: An International Perspective
By Robert Sandy, Peter J. Sloane and Mark S. Rosentraub



Palgrave Macmillan; 347 pages; $80
Palgrave Macmillan; 347

and cents, Michael Mandelbaum, who usually pens books on weightier matters of foreign policy, offers a scholar's view of the history and sociology of American sport in “The Meaning of Sports”. He turns his amateur anthropologist's eye to three of his country's best-known professional games: baseball, football and basketball. His account of baseball's emergence from America's agrarian tradition, the game's snail's pace reflecting a time when most Americans worked on a farm, helps to explain its fading appeal in recent years.

His argument that American football suited perfectly the needs of a martial era, and that the game was excellent preparation for the D-Day landings, has a ring of truth. After all, the playing fields of Eton have long been credited with Britain's victory at Waterloo. But other assertions can seem far-fetched. For instance, is basketball's recent success really due, as Mr Mandelbaum asserts, to the value of teamwork in the information age?

At its best, Mr Mandelbaum's book is an intriguing history of America's spectator sports. Readers who know nothing of the country's peculiar ball games will enjoy the comparison of basketball with European football. Thankfully, the author refrains from indulging in the sort of hagiography that marks so much sports writing, which makes this a great book for educated non-fans and recent initiates to American sports to kick off with.

pages; £29.99

Buy it at
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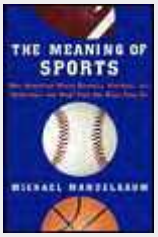
Amazon.co.uk

The Meaning of Sports: Why Americans Watch Baseball, Football, and Basketball and What They See When They Do
By Michael Mandelbaum



PublicAffairs; 332 pages; $26

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About sponsorship

Challenging the cult of speed

The beat of a different drum

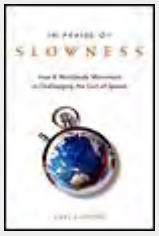
Jun 10th 2004
From The Economist print edition

TECHNOLOGY is determined to make things happen faster and faster: the mobile phone means we don't need to waste time just walking—we can talk as we walk. And then there is texting, for those who find talking too slow. At the same time (literally, if we want) the internet allows us to send as many messages in an hour as our fathers could have sent in a month; more and more cars are engineered to cruise comfortably at over 100mph; and meals can be microwaved in a moment. Only the ending of supersonic passenger flight last year suggests that this process may, in some respects at least, be reversible.

Yet this entertaining book argues that there is a worldwide movement that is just beginning to challenge the cult of speed. The author, Carl Honoré, a London-based Canadian, is a recovering speedaholic. The book begins with a confession: “I am Scrooge with a stopwatch,” he writes, the moment of truth dawning with the realisation that he is speed-reading through his son's bedtime stories. Mr Honoré then sets out on a personal and professional journey in search of a cure.

On the way, he comes across plenty of curiosities, including the Society for the Deceleration of Time and a Slow Sex movement. The latter, it seems, is not to be confused with Tantric sex, which involves special breathing and exercises as well as slow intercourse. The subject is discussed in a section of the book that will probably be read quite slowly. Mr Honoré explores more familiar “slow” trends too, such as yoga and the Slow Food movement, which has 60,000 members, half of them in Italy where the phenomenon began in 1986 as a reaction to fast food and the encroachment of McDonald's.

In Praise of Slowness: How a Worldwide Movement is Challenging the Cult of Speed
By Carl Honoré



HarperSanFrancisco; 320 pages; $24.95.
Orion; £16.99

Buy it at
Amazon.com
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“In Praise of Slowness” is a friendly and intelligent guide for harried types looking to change gear at home, work or play. It is best read as a series of separate articles. Each chapter focuses on a single topic, such as education or health care, and then compares standard approaches with “slow” alternatives. In education, the author holds up the Apple Tree as an exemplary institution. Founded by a group of parents in Tokyo in 1988, this unconventional school allows its pupils to come and go as they please, to study what they want and to take no exams. Mr Honoré admits that “it sounds like a recipe for anarchy”, but finds that “the laid-back regime actually works rather well.”

As for health care, the author tells the story of how a “nagging pain” in his leg found no lasting cure from traditional medicine with its quick solutions, which include painkillers and appointments with harassed doctors. So he turned to complementary and alternative sources, and found relief at London's Hale Clinic. There he was offered reiki, an unhurried practice that “involves channelling energy by holding the hands above the body”. “Whatever the explanation,” he says, “reiki seems to work for me.”

Sometimes, Mr Honoré slips into the earnest, empowering tone found in self-help manuals, but he quickly recovers his journalistic voice with a light mix of well-researched historic trivia and contemporary statistics. While much of what he discovers is little more than common sense, his anecdotes and self-deprecating humour convey the pleasure and reward that he experienced on his slow pilgrimage. Towards the end of the book Mr Honoré asks, “when will the Slow Movement turn into a Slow Revolution?” He does not come up with an answer. But then there are probably still some things in the human experience that cannot be rushed.

In Praise of Slowness: How a Worldwide Movement is Challenging the Cult of Speed.
By Carl Honoré.

HarperSanFrancisco; 320 pages; $24.95.
Orion; £16.99

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Royal Geographical Society

Great explorations

Jun 10th 2004
From The Economist print edition

A famous London archive opens to the public

RGS

The tanks came to earth in Kensington

BRITAIN'S Royal Geographical Society (RGS) has a reputation as an exclusive explorers' club, the sort of place where the intrepid pop in for sherry, having climbed, crossed or otherwise conquered some inhospitable bit of the planet. Over its 174-year history, the RGS has gathered an extraordinary assortment of souvenirs from famous travels, among them watercolour sketches of Victoria Falls by David Livingstone, as well as oxygen tanks from the 1953 ascent of Everest by Sir Edmund Hillary and Tenzing Norgay. Equally impressive is the society's collection of maps—ranging from a 500-year-old atlas to recently declassified Soviet military surveys.

The RGS has long permitted scholars to consult its archive, although accessing the 2m items scattered across its rambling Victorian premises in London's Kensington was an expedition in itself. But this week it opened these to the public as part of a £7.1m ($13m) project to “unlock” its treasures. The project has also consolidated the material and, crucially, compiled a single electronic catalogue, which is available on the web. The physical manifestation of the society's new openness is a modern glass appendage housing the public entrance and new exhibition space. Some of the more spectacular items in the archive will be on temporary display; ordinary visitors can pay to consult the rest in a new reading room.

Opening the archive has already added to the RGS's store of knowledge in unexpected ways. Members of the Pepperpot Day Centre, a club for African-Caribbean pensioners in West London, pointed out during a recent visit that some of the archive's famous photos of everyday life in the early 20th-century Caribbean were incorrectly labelled, and others were clearly staged.

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About sponsorship

Social status

It's tough at the bottom

Jun 10th 2004
From The Economist print edition

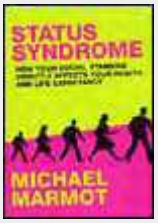
LIKE chickens, people have a pecking order. Sir Michael Marmot shows that this order is strongly related to health and longevity. The higher in the order, the longer and healthier the life. On average, Oscar winners live about four years more than other Hollywood actors, and at either end of a 12-mile subway ride between poor downtown Washington, DC, and rich white Montgomery County there is a difference in life expectancy of 20 years.

The roots of Sir Michael's book lie in his work studying the health of Britain's civil servants in the 1970s. He was surprised to find that bureaucrats in the lower grades had a greater risk of heart disease than those higher up the ladder. Sir Michael, who is a professor of epidemiology and public health at University College London, has spent three decades looking at this pattern and picking apart issues of causality—for example, do civil servants get to the top of the tree because they are healthier to start with (or have better genes)? Or is it getting to the top that makes them healthier? Such issues are dealt with (rather exhaustively) in this book.

Others have found similar relationships between health and status in countries all around the world—including relatively classless places such as Sweden. The phenomenon, it seems, is mostly due to stress. Long-term stress damages health, and ultimately shortens lifespans. Studies on primates, including Whitehall civil servants, show that lower-status workers have higher levels of the stress hormones that organise the body's response to threat.

The book argues that human hierarchies cannot be eliminated. But since their consequences for health vary vastly from place to place, the differences between those at the top and the bottom can be made smaller. It is possible to reduce the disparity in the lifespan of a boss and his workers. But how? Sir Michael suggests giving people greater autonomy and social cohesion rather than raising their pay or improving their access to medical services. In concrete terms, that might translate into fewer working hours or more flexible working. Those looking for a quick fix, however, will be sorry to find that job-title inflation—from, say, secretary to personal assistant—is unlikely to help.

Status Syndrome: How Your Social Standing Directly Affects Your Health and Life Expectancy
By Michael Marmot



Bloomsbury; 311 pages; £12.99. To be published in America by Times Books in August

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About sponsorship

Ronald Reagan

Jun 10th 2004
From The Economist print edition

Allstar

Ronald Wilson Reagan, actor turned president, died on June 5th, aged 93

THE presidential gut does not often appear in section in the newspapers. When Ronald Reagan's did, in 1985, he was not pleased. True, he had been admitted to hospital and had had an operation. But as soon as possible he was at the hospital window, grinning and waving in his playboy's dressing gown, and a few days later he was back on his horse. Cancer? Not at all: “a self-contained polyp” that had “begun to develop a few cancer cells” had been removed from him.

Such sunny nonchalance summed him up. For some observers, it showed irresponsibility, self-delusion, an inability to face up to the grimmer sides of life. For others, it was an inspiration. This was a man who, though burdened with the world's most serious job, seemed to take it lightly. He popped jelly beans in cabinet meetings, and cracked jokes, rather than getting his head into the paperwork. He liked, indeed insisted on, his afternoon nap. His favourite books were westerns, and his favourite occupation, apart from those naps, was clearing brush on his ranch on the coast of California.

Hollywood had been his career before he turned to politics, and this too made him suspect to many inside the Beltway. The tall trim body, the graceful bearing and the suspiciously dark hair (he always swore he did not dye it) doubtless concealed a lack of brain. His arrival in Washington, at a mink-and-diamond-draped inaugural ball, scandalised the puritanical Carterites who had preceded him. The cluster of B-movie roles he had played, from sailors to baseball heroes, getting the well-built girl in most of them, had probably given him an exaggerated sense of his own power and influence.

These impressions were not always wrong. Mr Reagan's masterly delivery sometimes disguised the fact that he did not really know what he was saying; the lines were written, for safety's sake, on three-by-four cards or on his shirt-cuff. That catch in the voice, his trademark, was another actor's trick. Mr Reagan's empathy with ordinary people was never, like Bill Clinton's, a matter of genuine human warmth; in many respects he was a rather distant man and president. The performance was all.

And performance was the point. In 1981 America's president could not return to the imperialism of Richard Nixon's day, nor assert himself much against the barons in Congress. Yet he could play the *pater patriae*, the figurehead of the nation and, above all, the articulator of its thoughts and dreams. This Mr Reagan did in a way that was almost magical. On the D-Day beaches in 1984, he spoke with the emotion of an old soldier, though he had never fought; when the *Challenger* spacecraft exploded in 1986, he found the exact mixture of heartbreak, bafflement and comfort.

His feel for radio, especially, had been honed by years spent as a sports commentator on local radio in Iowa. There, reading swiftly from handfuls of telegrams, he thrilled his audiences with play-by-play accounts of games he had never seen. His darker political days, such as the scandal that bizarrely linked Iranian missiles to Nicaraguan contras, and his more fantastic schemes, such as Star Wars, were also linked by his detractors to his ability to live in unreal worlds.

Out of the mid-west

Two small towns in Illinois, Dixon and Tampico, were his roots. His father was a general-store manager, a drinker and a drifter. The young Ronald, his second son, spent “a rare Huck Finn idyll” of childhood, adventuring in the woods and fields; and he preserved through his time as president a sense of humility, even of disbelief, that he should have gone from there as far as the White House.

Nothing had suggested such a step. An indifferent student, Mr Reagan had hoped only for a job selling sporting goods and summers lounging round as a local lifeguard. A chance screen test took him to Hollywood; there, according to his own stories, he bummed around in much the same fashion. In fact, as head of the Screen Actors Guild in the “red scare” 1940s, he had served a fairly rigorous political apprenticeship. It was followed by two terms as governor of California in the rioting 1960s and 1970s, no easy ride. People forgot these qualifications for office, and he himself was not bothered to remind them.

Equally attractive was his nonchalant, ever-hopeful attitude to life. In 1981, when John Hinckley tried to assassinate him, he cracked a string of jokes while doctors were dealing with near-fatal lung wounds. He refused to let the job kill him either, delegating where he could and, in the long pauses of his working days, writing boyish love-letters to his wife. Though he seldom went to church, he evidently felt that God, too, looked after him.

Behind all that lay a surprising toughness. As a self-taught politician, he had come to know what was right and what was wrong, and said so in terms that shocked an increasingly relativist world. He saw things simply, sometimes simplistically, but always clearly. Standing at the Berlin Wall in 1987, he looked over to the east and, struck by its drabness and emptiness, knew that the system behind it was evil. This was not the head talking, the result of hard thought or diligent reading of consultation papers. It was the heart.

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Overview

Jun 10th 2004
From The Economist print edition

America's economy gained 248,000 jobs in May. Payrolls for March and April were revised up by a total of 74,000 jobs. The unemployment rate was unchanged at 5.6% as more people entered the labour force.

Japan's economy grew by 1.5% in real terms in the first quarter, up from an earlier estimate of 1.4%. Japanese bond prices fell sharply. The yield on Japan's benchmark ten-year government bond rose to 1.77%, the highest in over three years.

The **euro area's** consumers are shopping more. Retail sales volumes rose by 1.3% in April, and by 1.0% in the year to April.

Germany's struggling economy is showing some signs of vigour. Industrial production rose in April by 2.2%, the biggest rise since October. Inflation in wholesale prices ran at 3.6% in the year to May, the fastest pace in over three years. Exports rose strongly in April. But not all the news was good: the ranks of the unemployed rose for the fourth straight month in May, by 9,000. The jobless rate was unchanged at 10.5%.

Industrial output in **Spain** rose by 0.9% and manufacturing in **The Netherlands** output rose by 1.1% in the year to April.

Manufacturing output in **Britain** rose by 0.9% in April, the strongest growth in nearly two years. The country's trade deficit grew to $8.4 billion.

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Output, demand and jobs

Jun 10th 2004
From The Economist print edition

% change on year ago

	GDP latest		GDP qtr*	The Economist poll GDP forecasts 2004	2005	Industrial production latest		Retail sales (volume) latest		Unemployment % rate latest		year ago
Australia	+ 3.2	Q1	+ 0.9	+ 3.8	+ 3.1	– 0.9	Q4	+ 7.7	Q1	5.5	May	6.1
Austria	+ 0.8	Q4	+ 0.4	+ 1.6	+ 1.9	+ 2.1	Mar	+ 2.6	Mar	4.4	May	4.4
Belgium	+ 2.0	Q1	+ 3.0	+ 1.9	+ 2.0	– 1.0	Apr	nil	Mar	12.3	May†	11.4
Britain	+ 3.0	Q1	+ 2.5	+ 3.1	+ 2.6	+ 0.5	Apr	+ 6.1	Apr	4.7	Feb††	5.1
Canada	+ 1.6	Q1	+ 2.4	+ 2.8	+ 3.3	+ 1.9	Mar	+ 2.5	Feb	7.2	May	7.9
Denmark	+ 1.3	Q1	+ 2.3	+ 2.0	+ 2.2	+ 3.3	Apr	+ 5.3	Apr	6.5	Apr	5.9
France	+ 1.7	Q1	+ 3.1	+ 2.1	+ 2.2	+ 1.1	Apr	+ 2.9	Mar	9.8	Apr	9.6
Germany	+ 1.5	Q1	+ 1.8	+ 1.4	+ 1.7	+ 2.9	Apr	– 1.8	Apr	10.5	May§	10.7
Italy	+ 0.8	Q1	+ 1.7	+ 1.1	+ 1.7	– 0.6	Mar	– 2.1	Feb	8.5	Jan	8.9
Japan	+ 5.6	Q1	+ 6.1	+ 4.1	+ 2.1	+ 8.5	Apr	– 2.2	Mar	4.7	Apr	5.4
Netherlands	+ 0.8	Q1	+ 1.7	+ 1.1	+ 1.7	+ 1.1	Apr	– 4.6	Feb‡	6.4	Apr**	4.9
Spain	+ 2.8	Q1	+ 2.6	+ 2.8	+ 2.8	+ 0.9	Apr	+ 4.1	Apr	11.4	Apr	11.7
Sweden	+ 1.9	Q4	+ 2.2	+ 2.5	+ 2.5	+ 2.2	Mar	+ 3.5	Apr	5.4	Apr†	4.6
Switzerland	+ 1.5	Q1	+ 1.6	+ 1.7	+ 1.9	+ 1.7	Q4	+ 5.4	Mar	3.8	May†	3.6
United States	+ 5.0	Q1	+ 4.4	+ 4.7	+ 3.6	+ 4.8	Apr	+ 8.5	Apr	5.6	May	6.1
Euro area	+ 1.3	Q1	+ 2.3	+ 1.7	+ 2.0	+ 1.0	Mar	+ 1.0	Apr	9.0	Apr	8.9
MORE COUNTRIES	Data for the countries below are not provided in printed editions of *The Economist*											
Finland	+ 2.7	Q1	+ 3.0	na	na	+ 0.7	Apr	+ 4.8	Mar	10.6	Apr†	10.4
Greece	+ 4.1	Q1	+ 3.0	na	na	+ 3.8	Mar	+ 6.4	Feb	na		na
Iceland	+ 4.9	Q4	na	na	na	– 0.3	2002	na		3.5	Mar†	4.0
Ireland	+ 2.7	Q4	na	na	na	+ 5.9	Mar	+ 5.0	Mar	4.5	May	4.4
Luxembourg	+ 2.1	2003	na	na	na	– 1.2	Dec	+ 0.1	Jan	4.3	Apr	3.6
New Zealand	+ 3.2	Q4	+ 2.4	na	na	+ 3.2	Q4	+ 8.0	Q1	4.3	Q1	4.9
Norway	+ 2.9	Q1	+ 3.9	na	na	+ 0.7	Apr	+ 2.1	Apr	4.5	Q1	4.4
Portugal	+ 0.1	Q1	+ 2.4	na	na	– 3.2	Apr	+ 3.6	Apr	6.4	Q1†	6.4

*% change on previous quarter at an annual rate. †Not seasonally adjusted. ‡New series. ††Dec-Feb; claimant count rate 2.9% in Apr. §EU harmonised rate 9.8% in Apr. **Feb-Apr.

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Prices and wages

Jun 10th 2004
From The Economist print edition

% change on year ago

	Consumer prices			The Economist poll consumer prices forecast		Producer prices			Wages/earnings		
	latest		year ago	2004	2005	latest		year ago	latest		year ago
Australia	+ 2.0	Q1	+ 3.4	+ 2.3	+ 2.6	– 1.1	Q1	+ 3.0	+ 5.1	Q1	+ 4.4
Austria	+ 1.6	May	+ 1.1	+ 1.5	+ 1.5	+ 6.1	May	+ 0.6	+ 2.2	Apr	+ 2.2
Belgium	+ 2.6	May	+ 1.0	+ 1.5	+ 1.5	+ 2.6	Apr	+ 0.2	+ 1.9	Q1	+ 2.4
Britain	+ 1.2	Apr*	+ 1.5	+ 1.5	+ 1.8	+ 1.8	Apr	+ 1.6	+ 5.2	Mar†	+ 3.3
Canada	+ 1.6	Apr	+ 3.0	+ 1.6	+ 2.0	+ 1.5	Apr	– 0.5	+ 3.0	Mar	+ 1.6
Denmark	+ 0.8	Apr	+ 2.5	+ 1.4	+ 2.0	+ 1.6	Apr	– 0.5	+ 3.5	Q4	+ 3.9
France	+ 2.1	Apr	+ 2.0	+ 2.0	+ 1.6	+ 1.3	Apr	+ 1.0	+ 2.7	Q4	+ 3.5
Germany	+ 2.0	May	+ 0.7	+ 1.4	+ 1.2	+ 3.6	May	– 0.4	+ 1.4	Mar	+ 3.6
Italy	+ 2.3	May	+ 2.7	+ 2.2	+ 2.1	+ 1.7	Apr	+ 2.0	+ 2.8	Apr	+ 1.7
Japan	– 0.4	Apr	– 0.1	– 0.1	+ 0.1	+ 1.1	May	– 1.1	+ 0.7	Apr	+ 1.8
Netherlands	+ 1.5	May	+ 2.0	+ 1.4	+ 1.3	+ 2.1	Apr	+ 1.4	+ 1.7	Apr	+ 3.0
Spain	+ 2.7	Apr	+ 3.1	+ 2.6	+ 2.6	+ 2.6	Apr	+ 1.4	+ 3.3	Q4	+ 3.9
Sweden	+ 0.3	Apr	+ 2.3	+ 0.8	+ 1.6	– 0.2	Apr	– 0.1	+ 1.5	Mar	+ 1.5
Switzerland	+ 0.9	May	+ 0.4	+ 0.4	+ 0.9	+ 0.7	Apr	– 0.3	+ 1.4	2003	+ 1.8
United States	+ 2.3	Apr	+ 2.2	+ 2.3	+ 2.0	+ 3.7	Apr	+ 2.4	+ 2.2	May	+ 3.0
Euro area	+ 2.5	May	+ 1.8	+ 1.8	+ 1.7	+ 1.4	Apr	+ 1.7	+ 2.5	Q4	+ 3.4
MORE COUNTRIES	Data for the countries below are not provided in printed editions of *The Economist*										
Finland	– 0.4	Apr	+ 1.1	na	na	+ 0.3	Apr	– 0.3	+ 4.1	Q1	+ 4.1
Greece	+ 2.9	May	+ 3.8	na	na	+ 2.8	Apr	+ 1.0	na		na
Iceland	+ 3.2	May	+ 2.2	na	na	+ 5.0	May	+ 3.0	+ 4.0	Apr	+ 5.6
Ireland	+ 1.4	Apr	+ 4.3	na	na	– 4.1	Apr	– 7.5	+ 6.1	Q4	+ 6.4
Luxembourg	+ 2.3	May	+ 1.9	na	na	+ 0.1	Dec	+ 1.3	– 0.4	Dec	+ 0.7
New Zealand	+ 1.5	Q1	+ 2.5	na	na	– 0.6	Q1	– 1.3	+ 2.2	Q1	+ 2.3
Norway	+ 0.4	Apr	+ 2.9	na	na	+12.2	Apr	– 4.9	+ 4.6	Q1	+ 5.3
Portugal	+ 2.3	Apr	+ 3.7	na	na	+ 1.1	Apr	+ 2.0	+ 2.6	Mar	– 2.6

*New series. RPI inflation rate in April: 2.5%. †Jan-Mar.

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Economic forecasts

Jun 10th 2004
From The Economist print edition

The Economist poll of forecasters, June averages (previous month's, if changed)

	Real GDP, % change Low/high range		Real GDP, % change average		Consumer prices % increase		Current account % of GDP	
	2004	2005	2004	2005	2004	2005	2004	2005
Australia	3.2/4.3	2.6/3.6	3.8 (3.9)	3.1	2.3 (2.2)	2.6 (2.5)	–5.2	–4.5
Austria	1.3/2.0	1.3/2.3	1.6	1.9 (2.0)	1.5 (1.3)	1.5 (1.4)	0.4(–0.3)	0.5 (–0.6)
Belgium	1.7/2.2	1.3/2.6	1.9	2.0 (1.9)	1.5 (1.4)	1.5	3.9 (3.7)	3.9 (3.8)
Britain	2.8/3.4	2.0/3.3	3.1 (3.2)	2.6 (2.7)	1.5	1.8	–2.6(–2.5)	–2.6 (–2.5)
Canada	1.8/3.3	2.6/3.9	2.8 (2.7)	3.3	1.6	2.0	1.8 (1.7)	1.3 (1.1)
Denmark	1.6/2.2	1.4/2.8	2.0 (1.9)	2.2	1.4	2.0	2.6 (2.5)	2.5 (2.4)
France	1.5/2.5	1.4/2.7	2.1 (1.8)	2.2 (2.1)	2.0 (1.9)	1.6	0.9 (1.0)	0.8 (0.9)
Germany	1.0/1.8	1.0/2.4	1.4	1.7 (1.6)	1.4 (1.2)	1.2 (1.1)	2.6 (2.4)	2.6 (2.4)
Italy	0.7/1.5	0.9/2.4	1.1 (1.0)	1.7	2.2	2.1	–1.0(–0.9)	–0.9 (–1.0)
Japan	2.9/4.9	1.0/3.8	4.1 (3.3)	2.1 (2.0)	–0.1 (–0.2)	0.1 (nil)	3.3 (3.2)	3.3 (3.2)
Netherlands	0.5/1.7	1.2/2.4	1.1 (0.8)	1.7 (1.6)	1.4 (1.3)	1.3	2.6 (2.3)	2.7 (2.5)
Spain	2.4/3.2	2.5/3.3	2.8	2.8 (2.9)	2.6 (2.3)	2.6 (2.4)	–2.9	–3.0 (–2.9)
Sweden	2.0/2.9	1.8/3.0	2.5 (2.4)	2.5 (2.4)	0.8	1.6	5.9 (5.6)	5.6 (5.4)
Switzerland	0.8/2.1	1.3/2.2	1.7 (1.6)	1.9 (1.8)	0.4	0.9 (0.8)	10.6(10.3)	10.3 (10.1)
United States	3.9/5.1	3.2/4.5	4.7	3.6	2.3 (1.9)	2.0 (1.8)	–5.1	–5.1 (–5.0)
Euro area	1.3/2.0	1.4/2.5	1.7 (1.6)	2.0	1.8 (1.7)	1.7 (1.6)	0.4 (0.5)	0.4

Sources: ABN Amro, Deutsche Bank, Economist Intelligence Unit, Goldman Sachs, HSBC Securities, KBC Bank, J.P. Morgan Chase, Morgan Stanley, Decision Economics, BNP Paribas, Royal Bank of Canada, Citigroup, Scotiabank, UBS

Every month *The Economist* surveys a group of forecasters and calculates the average of their predictions for economic growth, inflation and current-account balances for 15 countries and for the euro area. The table also shows the highest and lowest projections for growth. The previous month's forecast, where different, is shown in brackets. The most dramatic change this month is the forecast for Japan's GDP growth. In May our panel pencilled in growth of 3.3% for 2004, now it expects 4.1%. Early last year, the average forecast was for a meagre 0.6% growth this year. The panel also now expects Japan's inflation rate to turn positive in 2005, though not by much. France's GDP growth for this year has also been revised up, to 2.1%. Our forecasters are more worried about inflation in America: they have lifted their 2004 forecast from 1.9% to 2.3%.

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Money and interest rates

Jun 10th 2004
From The Economist print edition

	Money supply* % change on year ago			Interest rates % p.a. (Jun 9th 2004)					
				3-mth money market		2-year	10-year gov't bonds		corporate
	narrow	broad		latest	year ago	gov't bonds	latest	year ago	bonds
Australia	+ 7.0	+11.0	Apr	5.49	4.66	5.17	5.98	4.46	6.73
Britain	+ 5.7	+ 7.1	Apr	4.72	3.63	4.97	5.23	3.91	5.96
Canada	+12.6	+ 8.6	Apr	2.03	3.14	3.27	5.24	4.23	6.34
Denmark	+ 8.8	+ 8.8	Apr	2.25	2.30	2.64	4.50	3.69	5.53
Japan	+ 4.2	+ 2.0	May	0.02	0.02	0.20	1.72	0.44	1.77
Sweden	+ 0.3	+ 3.2	Apr	1.98	2.82	2.96	4.66	3.92	3.06
Switzerland	+ 9.9	+ 4.1	Apr	0.34	0.27	1.33	2.92	2.08	2.73
United States	+ 6.8	+ 4.9	Apr	1.25	1.08	2.77	4.81	3.19	6.16
Euro area†	+10.9	+ 5.6	Apr	2.10	2.12	2.61	4.33	3.48	4.14

*Narrow: M1 except Britain and Sweden M0, broad: M2 or M3 except Britain M4. †Germany for bonds. Benchmarks: US 30-year 5.48%, Japan No. 260 1.745%. Central bank rates: US fed funds 1.00%, ECB refinancing 2.00%, BOJ overnight call 0.001%, BOE repo 4.25%. Sources: Commerzbank, Danske Bank, J.P. Morgan Chase, Royal Bank of Canada, Stockholmsbörsen, UBS, Global Insight, Westpac, Thomson Datastream. Rates cannot be construed as banks' offers.

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The Economist commodity price index

Jun 10th 2004
From The Economist print edition

1995=100

	May 25th*	Jun 1st	Jun 8th†	% change on one month	% change on one year
Dollar index					
All items	96.1	97.6	95.1	– 2.4	+22.9
Food	94.4	95.4	93.0	– 4.8	+18.3
Industrials					
All	98.3	100.6	98.1	+ 1.0	+29.2
Nfa‡	96.3	96.9	94.2	– 4.5	+20.8
Metals	99.9	103.8	101.3	+ 5.8	+36.7
Sterling index					
All items	83.7	83.8	81.8	– 6.6	+10.4
Euro index					
All items	104.4	105.0	102.0	– 5.9	+17.0
Yen index					
All items	114.7	114.2	111.1	– 5.8	+14.6
Gold					
$ per oz	387.75	395.25	392.25	+ 4.1	+11.0
West Texas Intermediate					
$ per barrel	41.14	42.35	37.15	– 7.3	+17.3

* Revised. † Provisional. ‡ Non-food agriculturals.

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Stockmarkets

Jun 10th 2004
From The Economist print edition

Market indices

	Jun 9th	2004 high	2004 low	% change on one week	% change on record high	% change on Dec 31st 2003 in local currency	% change on Dec 31st 2003 in $ terms
Australia (All Ordinaries)	3,466.6	3,482.4	3,274.9	– 0.2	– 0.2	+ 4.9	– 3.7
Austria (ATX)	1,869.8	1,985.9	1,568.9	+ 1.4	– 5.8	+21.0	+16.0
Belgium (Bel 20)	2,470.1	2,517.3	2,244.2	+ 2.3	–32.9	+10.1	+ 5.5
Britain (FTSE 100)	4,489.5	4,575.7	4,309.4	+ 1.5	–35.2	+ 0.3	+ 2.4
Canada (Toronto Composite)	8,317.1	8,898.8	8,123.5	– 0.7	–27.0	+ 1.2	– 3.4
Denmark (KBX)	229.7	241.3	219.0	+ 0.9	–23.9	+ 7.6	+ 3.2
France (SBF 250)	2,520.6	2,594.4	2,411.5	+ 1.5	–42.6	+ 4.5	+ 0.2
(CAC 40)	3,699.3	3,811.4	3,465.3	+ 1.5	–46.6	+ 4.0	– 0.3
Germany (DAX)	3,997.8	4,151.8	3,726.1	+ 2.8	–50.4	+ 0.8	– 3.3
Italy (BCI)	1,311.7	1,340.3	1,239.5	+ 1.6	–39.9	+ 4.4	+ 0.1
Japan (Nikkei 225)	11,449.7	12,163.9	10,365.4	+ 1.8	–70.6	+ 7.2	+ 5.2
(Topix)	1,152.8	1,217.9	1,022.6	+ 1.4	–60.0	+10.5	+ 8.3
Netherlands (AEX)	341.7	364.8	323.0	+ 2.2	–51.3	+ 1.2	– 3.0
Spain (Madrid SE)	849.1	881.7	808.0	+ 2.0	–25.9	+ 5.1	+ 0.8
Sweden (Affarsvarlden Gen)	203.3	218.1	188.5	+ 2.1	–49.2	+ 8.0	+ 3.0
Switzerland (Swiss Market)	5,715.2	5,934.4	5,469.0	+ 1.5	–32.1	+ 4.1	+ 2.8
United States (DJIA)	10,368.4	10,737.7	9,906.9	+ 1.0	–11.6	– 0.8	– 0.8
(S&P 500)	1,114.8	1,157.8	1,084.1	– 0.9	–27.0	+ 0.3	+ 0.3
(NASDAQ Comp)	1,990.6	2,153.8	1,876.6	+ 0.1	–60.6	– 0.6	– 0.6
Europe (FTSE Eurotop 300)*	1,003.5	1,026.2	957.9	+ 2.1	–41.1	+ 4.8	+ 0.4
Euro area (FTSE Ebloc 100)*	845.2	888.3	806.7	+ 2.1	–45.5	+ 1.6	– 2.6
World (MSCI)†	1,051.6	1,085.8	997.0	+ 0.6	–27.4	+ 1.5	+ 1.5
World bond market (Citigroup)‡	589.2	619.5	575.1	– 0.7	– 4.9	– 2.4	– 2.4

*In euro terms. †Morgan Stanley Capital International index includes individual markets listed above plus eight others, in dollar terms. ‡Citigroup World Government Bond Index, total return, in $ terms.

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Trade, exchange rates and budgets

Jun 10th 2004
From The Economist print edition

	Trade balance*, $bn latest 12 months		Current account $bn latest 12 mths		The Economist poll % of GDP, forecast 2004	2005	Exchange rate trade-weighted† 1990=100 Jun 9th	year ago	Currency units per $ Jun 9th	year ago	per £	per euro	per ¥100	Budget balance % of GDP 2004‡
Australia	− 16.8	Apr	− 33.0	Q1	− 5.2	− 4.5	82.2	82.4	1.44	1.51	2.64	1.75	1.32	0.5
Austria	− 1.2	Feb	− 1.3	Mar	+ 0.4	+ 0.5	102.8§	102.3	0.83	0.85	1.51	–	0.76	-1.3
Belgium	+ 22.1	Mar	+ 8.0	Dec	+ 3.9	+ 3.9	102.7§	102.2	0.83	0.85	1.51	–	0.76	-0.2
Britain	− 89.4	Apr	− 30.8	Q4	− 2.6	− 2.6	106.1	99.5	0.55	0.60	–	0.66	0.50	-2.9
Canada	+ 45.2	Mar	+ 20.9	Q1	+ 1.8	+ 1.3	85.3	86.1	1.35	1.35	2.47	1.64	1.24	1.2
Denmark	+ 9.8	Mar	+ 6.4	Mar	+ 2.5	+ 2.5	105.9	106.9	6.15	6.32	11.2	7.44	5.63	0.9
France	+ 5.1	Mar	+ 10.0	Mar	+ 0.9	+ 0.8	106.1§	105.4	0.83	0.85	1.51	–	0.76	-3.8
Germany	+174.2	Apr	+ 74.3	Apr	+ 2.6	+ 2.6	103.8§	102.9	0.83	0.85	1.51	–	0.76	-3.7
Italy	+ 2.0	Mar	− 18.6	Mar	− 1.0	− 0.9	75.7§	75.1	0.83	0.85	1.51	–	0.76	-3.1
Japan	+121.4	Apr	+157.2	Apr	+ 3.3	+ 3.3	135.2	127.7	109	118	200	132	–	-7.1
Netherlands	+ 32.6	Mar	+ 18.7	Q1	+ 2.6	+ 2.7	102.1§	101.6	0.83	0.85	1.51	–	0.76	-3.1
Spain	− 56.5	Mar	− 25.3	Feb	− 2.9	− 3.0	76.9§	76.6	0.83	0.85	1.51	–	0.76	0.3
Sweden	+ 21.5	Apr	+ 21.2	Q1	+ 5.9	+ 5.6	80.9	81.7	7.54	7.74	13.8	9.12	6.90	0.2
Switzerland	+ 7.9	Apr	+ 32.8	Q4	+10.6	+10.3	114.1	113.1	1.25	1.31	2.29	1.52	1.15	-1.6
United States	−560.4	Mar	−540.9	Q4	− 5.1	− 5.1	97.5	101.6	–	–	1.83	1.21	0.92	-4.7
Euro area	+ 98.2	Mar	+ 47.6	Mar	+ 0.4	+ 0.4	89.5	91.3	0.83	0.85	1.51	–	0.76	-2.8
MORE COUNTRIES	Data for the countries below are not provided in printed editions of *The Economist*													
Finland	+ 15.0	Mar	+ 10.9	Mar	na	na	81.7§	81.1	0.83	0.85	1.52	–	0.76	1.6
Greece	− 26.8	Mar	− 10.3	Mar	na	na	59.4§	59.1	0.83	0.85	1.52	–	0.76	-3.2
Iceland	− 0.3	Apr	− 0.6	Q4	na	na	96.5**	97.2	72.0	73.6	132	87.1	65.9	0.2
Ireland	+ 42.8	Mar	− 3.0	Q4	na	na	93.6§	93.4	0.83	0.85	1.52	–	0.76	-0.5
Luxembourg	− 3.7	Mar	+ 2.5	Q4	na	na	102.7§	102.2	0.83	0.85	1.52	–	0.76	-1.8
New Zealand	− 2.4	Apr	− 3.5	Q4	na	na	99.5	96.9	1.61	1.73	2.94	1.95	1.47	2.9
Norway	+ 28.2	Apr	+ 28.9	Mar	na	na	97.9	98.1	6.76	6.99	12.4	8.18	6.19	10.4
Portugal	− 14.4	Mar	− 8.4	Mar	na	na	93.6**	92.7	0.83	0.85	1.52	–	0.76	-3.8

*Merchandise. Australia, Britain, France, Canada, Japan and United States imports fob, exports fob. All others cif/fob. †Bank of England except §IMF, April average. ‡OECD forecast. **IMF, March average.

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The Economist all-items index

Jun 10th 2004
From The Economist print edition

Our dollar-based commodities index rose to a seven-year high in March, thanks in part to Chinese demand for raw materials. Shrinking grain and soyabean stocks also boosted prices.

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Overview

Jun 10th 2004
From The Economist print edition

Thailand's economy grew by 6.5% in the year to the first quarter, compared with growth of 7.8% in the year to the fourth quarter.

Industrial output in **Malaysia** grew by 14.0% in the year to April, up from growth of 13.2% in the year to March.

Industrial output in **Turkey** grew in the year to April by 16.5%, much more than expected.

Brazilian consumer prices rose by 5.2% in the year to May.

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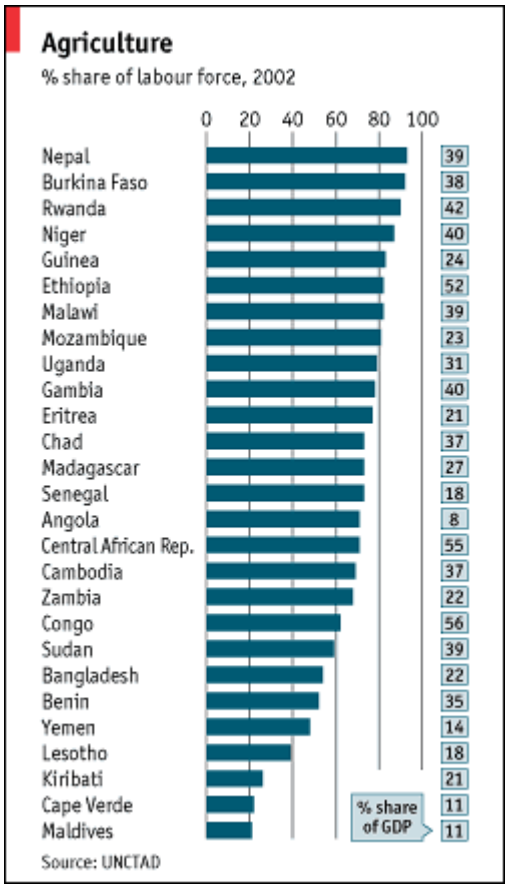
Agriculture

Jun 10th 2004
From The Economist print edition

Farming still looms large in the world's least-developed countries (LDCs). According to the United Nations, almost seven out of ten workers in these countries are, on average, reliant on agriculture. In Nepal and Burkina Faso, the figure is even higher. More than 90% of the labour force is involved in agriculture, yet their output accounts for less than 40% of GDP. LDCs are the poorest and most economically vulnerable of all developing countries; there are currently 50 in the world, and their income per person is $750 or less. Among developing countries, 54% of the labour force is involved in agriculture.



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Economy

Jun 10th 2004
From The Economist print edition

	% change on year ago						Latest 12 months, $bn				Foreign reserves* $bn, latest	
	GDP		Industrial production		Consumer prices		Trade balance		Current account			
China	+ 9.8	Q1	+17.5	May	+ 3.8	Apr	+14.7	Apr	+45.9	2003	444.4	Mar
Hong Kong	+ 6.8	Q1	– 6.1	Q4	– 1.5	Apr	–11.4	Apr	+17.4	Q4	120.1	May
India	+10.4	Q4	+ 6.7	Mar	+ 3.5	Mar	–15.6	Apr	+ 3.2	Q4	114.3	May
Indonesia	+ 4.5	Q1	+ 5.1	Jan	+ 6.5	May	+27.9	Apr	+ 7.4	Q4	35.9	Apr
Malaysia	+ 7.6	Q1	+14.0	Apr	+ 1.0	Apr	+20.4	Apr	+12.3	Q4	53.9	May
Philippines	+ 6.4	Q1	–11.0	Mar	+ 4.5	May	– 1.7	Mar	+ 3.3	Dec	13.3	May
Singapore	+ 7.5	Q1	+22.2	Apr	+ 1.3	Apr	+15.5	Apr	+27.6	Q1	101.1	May
South Korea	+ 5.3	Q1	+11.3	Apr	+ 3.3	May	+26.5	May	+21.9	Apr	163.6	Apr
Taiwan	+ 6.3	Q1	+12.8	Apr	+ 0.9	May	+14.6	May	+27.4	Q1	229.0	May
Thailand	+ 6.5	Q1	+ 7.7	Apr	+ 2.4	May	+ 2.8	Apr	+ 7.5	Apr	41.6	Apr
Argentina	+11.3	Q4	+ 6.0	Apr	+ 4.3	May	+14.4	Apr	+ 7.9	Q4	15.8	Apr
Brazil	+ 2.7	Q1	+11.9	Mar	+ 5.2	May	+28.0	May	+ 5.9	Apr	50.5	Apr
Chile	+ 4.8	Q1	+ 4.9	Apr	+ 0.6	May	+ 5.8	May	– 0.1	Q1	16.0	May
Colombia	+ 3.8	Q1	+ 7.1	Mar	+ 5.4	May	+ 0.1	Mar	– 1.4	Q4	11.3	Apr
Mexico	+ 3.7	Q1	+ 6.4	Mar	+ 4.3	May	– 5.7	Apr	– 9.1	Q1	60.3	Apr
Peru	+ 5.5	Mar	+ 7.9	Mar	+ 3.2	May	+ 1.3	Mar	– 0.6	Q1	10.1	Apr
Venezuela	+29.8	Q1	+43.2	Mar	+21.8	May	+17.8	Q1	+12.3	Q1	17.8	Mar
Egypt	+ 3.1	2003†	+ 2.6	2003†	+ 5.5	Dec	– 6.0	Q4	+ 3.9	Q4	13.6	Feb
Israel	+ 2.6	Q1	+10.9	Mar	– 1.5	Apr	– 5.4	Apr	– 0.2	Q4	26.6	May
South Africa	+ 1.9	Q1	+ 2.9	Apr	+ 0.2	Apr	+ 1.5	Apr	– 1.5	Q4	8.9	May
Turkey	+ 6.1	Q4	+16.5	Apr	+ 8.9	May	–25.3	Mar	– 9.0	Mar	33.7	Apr
Czech Republic	+ 3.1	Q1	+10.1	Apr	+ 2.7	May	– 2.5	Apr	– 6.0	Q1	26.4	May
Hungary	+ 4.2	Q1	+ 9.4	Apr	+ 6.9	Apr	– 3.9	Mar	– 6.5	Mar	13.1	May
Poland	+ 6.9	Q1	+21.9	Apr	+ 2.2	Apr	– 5.5	Mar	– 2.9	Mar	34.3	Apr
Russia	+ 8.0	Q1	+ 6.7	Apr	+10.2	May	+63.3	Mar	+35.3	Q1	81.8	May
MORE COUNTRIES	Data for the countries below are not provided in printed editions of *The Economist*											
Estonia	+ 5.7	Q4	+ 4.1	Apr	+ 1.3	Apr	– 2.0	Mar	– 1.2	Q1	1.3	Mar
Latvia	+ 7.4	Q4	+14.8	Mar	+ 5.0	Apr	– 2.2	Mar	– 1.1	Mar	1.4	Mar
Lithuania	+ 7.5	Q1	na		– 0.6	Apr	– 2.8	Mar	– 1.2	Q4	3.4	Mar
Slovakia	+ 5.5	Q1	+ 9.6	Mar	+ 8.3	May	– 0.4	Apr	nil	Mar	11.7	Mar
Slovenia	+ 2.5	Q4	+ 7.8	Mar	+ 3.8	May	– 0.8	Mar‡	nil	Mar	8.6	Feb
Pakistan	+ 5.1	2003†	+18.7	Jan	+ 6.0	Apr	– 1.9	Apr	+ 2.4	Q1†	11.5	Mar
Saudi Arabia	+ 6.4	2003	na		+ 0.3	Mar	+42.6	2002	+29.7	2003	22.1	Apr

*Excluding gold, except Singapore; IMF definition. †Year ending June.

Sources: National statistics offices, central banks and stock exchanges; Thomson Datastream; Economist Intelligence Unit; Reuters; J.P. Morgan Chase; Hong Kong Monetary Authority; Centre for Monitoring Indian Economy; FIEL; EFG-Hermes; Bank Leumi Le-Israel; Standard Bank Group; Akbank; Deutsche Bank

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Financial markets

Jun 10th 2004
From The Economist print edition

	Currency units			Interest rates	Stockmarkets	% change on		
	per $		per £	short-term	Jun 9th		Dec 31st 2003	
	Jun 9th	year ago	Jun 9th	% p.a.		one week	in local currency	in $ terms
China	8.28	8.28	15.1	2.85	1,540.0	– 6.3	– 1.9	– 1.9
Hong Kong	7.80	7.80	14.3	0.52	12,339.9	+ 1.1	– 1.9	– 2.3
India	44.9	46.7	82.1	4.41	4,963.8	+ 0.8	– 15.0	– 13.7
Indonesia	9,285	8,232	16,975	7.49	709.8	– 1.3	+ 2.6	– 6.9
Malaysia	3.80	3.80	6.95	2.92	818.4	+ 1.5	+ 3.1	+ 3.1
Philippines	55.7	53.5	101.8	7.88	1,543.4	+ 1.1	+ 7.0	+ 6.7
Singapore	1.71	1.73	3.12	0.81	1,820.1	+ 1.6	+ 3.2	+ 2.6
South Korea	1,155	1,195	2,111	3.88	794.5	– 1.2	– 2.0	+ 1.1
Taiwan	33.3	34.7	60.8	1.10	5,965.7	+ 1.5	+ 1.3	+ 3.3
Thailand	40.6	41.8	74.2	1.30	611.6	– 3.7	– 20.8	– 22.7
Argentina	2.96	2.81	5.40	5.56	904.2	– 7.5	– 15.6	– 16.3
Brazil	3.11	2.88	5.69	15.79	19,868.0	+ 0.8	– 10.6	– 17.2
Chile	644	718	1,178	1.80	7,213.9	+ 0.4	– 1.7	– 9.6
Colombia	2,716	2,813	4,966	7.56	3,059.1	– 0.9	+ 31.1	+ 34.1
Mexico	11.4	10.6	20.8	6.59	10,219.0	+ 2.4	+ 16.2	+ 14.7
Peru	3.48	3.48	6.35	2.45	2,906.9	– 0.7	+ 19.4	+ 19.0
Venezuela	2,853§	1,598	5,215	14.75	25,491.9	– 0.3	+ 14.8	+ 14.8
Egypt	6.20	5.98	11.34	10.89	14,773.9	+ 1.8	+ 27.0	+ 26.2
Israel	4.52	4.41	8.27	1.00	575.7	– 0.1	+ 7.7	+ 4.7
South Africa	6.61	7.90	12.1	8.20	10,419.5	+ 1.0	+ 0.3	+ 1.3
Turkey	1,499,000	1,425,000	2,740,472	25.21	17,616.0	+ 4.4	– 5.4	– 11.3
Czech Republic	25.9	26.6	47.4	2.33	784.2	+ 0.3	+ 19.0	+ 17.7
Hungary	209	219	381	11.37	11,176.6	– 0.1	+ 19.2	+ 18.4
Poland	3.81	3.78	6.96	5.81	23,422.0	– 1.3	+ 12.5	+ 10.6
Russia	29.0	30.5	53.1	14.00	589.7‡	+ 3.8	+ 3.2	+ 4.0
EMF (MSCI)*	1.00	1.00	1.83	na	430.3	+ 0.1	– 2.8	– 2.8
EMBI+†	1.00	1.00	1.83	na	283.2	+ 0.5	– 4.0	– 4.0

*Emerging Mkts Free. †J.P. Morgan Chase's Emerging Mkts Bond Index Plus. ‡In $ terms. §Floating exchange rate.

Sources: National statistics offices, central banks and stock exchanges; Thomson Datastream; Economist Intelligence Unit; Reuters; J.P. Morgan Chase; Hong Kong Monetary Authority; Centre for Monitoring Indian Economy; FIEL; EFG-Hermes; Bank Leumi Le-Israel; Standard Bank Group; Akbank; Deutsche Bank

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Correction: road traffic deaths

Jun 10th 2004
From The Economist print edition

In our issue of April 17th 2004, we published incorrect statistics, provided by the World Health Organisation, for road traffic deaths in Mauritius and France. The correct figure for Mauritius is 14.7 road deaths per 100,000 inhabitants, not 43.9. For France, the correct figure is 12.1, not 4.1. We apologise for these errors.

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